

VOLVO
OWNERS MANUAL S40

VOLVO
for life



WEB EDITION

Dear Volvo owner

We hope you will enjoy many years of driving pleasure in your Volvo. The car has been designed for the safety and comfort of you and your passengers. Volvo is one of the safest cars in the world. Your Volvo has also been designed to satisfy all current safety and environmental requirements.

In order to increase your enjoyment of the car, we recommend that you familiarise yourself with the equipment, instructions and maintenance information contained in this owner's manual.

Thank you for choosing Volvo!

Introduction

Owner's Manual

A good way of getting to know your new car is to read the owner's manual, ideally before your first journey. This will give you the opportunity to familiarise yourself with new functions, to see how best to handle the car in different situations, and to learn to make the best use of all the car's features. Please pay attention to the safety instructions contained in the manual:



WARNING!

"Warning!" texts indicate where there is a risk of personal injury in the event of the instructions not being followed.

IMPORTANT!

"Important!" texts indicate a risk of damage to the car in the event of the instructions not being followed.

NOTE! Volvo cars are adapted for the varying requirements of different markets, as well as for national or local legal requirements and regulations.

The specifications, design features and illustrations in this owner's manual are not binding. We reserve the right to make modifications without prior notice.

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The equipment described in the owner's manual is not present in all models. In addition to standard equipment, this manual also describes options (factory fitted equipment) and certain accessories (extra equipment).

Volvo Car Corporation and the environment



Volvo Cars' environmental philosophy

Environmental care, safety and quality are the three core values which influence all operations of the Volvo Car Corporation. We also believe that our customers share our consideration for the environment.

Your Volvo complies with strict international environmental standards and is also manufactured in one of the cleanest and most resource-efficient plants in the world. Volvo Car Corporation has global certification to the ISO 14001 environmental standard, which leads to continuous improvements within the area of the environment.

EPI (Environmental Product Information) environmental product declarations are supplied for all Volvo models. You can now compare the environmental impact of different models and engines.

Read more at www.volvocars.com/EPI

Fuel consumption

Volvo cars have competitive fuel consumption in each of their respective classes. Lower fuel consumption generally results in lower emission of the greenhouse gas, carbon dioxide.

It is possible for the driver to influence fuel consumption, see page 4.

Efficient emission control

Your Volvo is manufactured following the concept *Clean inside and out* – a concept that encompasses a clean interior environment as well as highly efficient emission control. In many cases the exhaust emissions are well below the applicable standards.

In addition there is a special radiator coating, PremAir®¹, which can convert hazardous ground-level ozone into pure oxygen.

1. PremAir® is a registered trademark of Engelhard Corporation.

Volvo Car Corporation and the environment

Clean air in the passenger compartment

A sophisticated air cleaning system, IAQS¹ (Interior Air Quality System) ensures that the air in the passenger compartment is cleaner than the air in the traffic outside.

The system consists of an electronic sensor and a carbon filter. The air intake is closed if there is an increase in the level of reducing gases and oxidising gases in the passenger compartment, e.g. carbon monoxide, for example in heavy traffic, queues and tunnels. The entry of nitrous oxides, ground-level ozone and hydrocarbons is prevented by the carbon filter.

Textile standard

The interior of a Volvo is designed to be healthy and safe - even for people with contact allergies and for asthma sufferers. Extreme attention has been given to choosing environmentally-compatible materials. This means that they also fulfil the requirements of the Öko-Tex 100 ecological standard - a major advance towards a healthier passenger compartment environment.

Öko-Tex certification covers seatbelts, carpets, thread and fabrics for example. Even the leather upholstery undergoes chromium-

free tanning with natural plant substances and meets the requirements.

Volvo workshops and the environment

Regular maintenance of the car creates the conditions for long service life and low fuel consumption. This way you contribute to a cleaner environment. When Volvo's workshops are entrusted with the repair and maintenance of the car, it becomes part of our system. We make clear environmental demands regarding the way in which workshops are designed in order to prevent spills and discharges into the environment, and this includes the thorough collection and sorting of the gaseous, liquid and solid waste that arises in our workshops. Our workshop staff have the knowledge and the tools required to guarantee good environmental care.

Reducing environmental impact

You can help reduce environmental impact, for example, by purchasing eco-labelled car care products and by servicing and maintaining the car according to the instructions in the Owner's Manual.

The following hints will help you to do your bit for the environment:

- Ensure that your tyre pressures are correct. Poorly inflated tyres increase fuel consumption. If any of the higher tyre pressures recommended by Volvo are used then fuel consumption decreases.
- Since a roof rack and ski box increase air resistance, leading to significantly higher fuel consumption, they should be removed immediately after use.
- Remove unnecessary items from the car - the greater the load the higher the fuel consumption.
- Is your car equipped with an engine block heater? If so, use it for a few hours before starting from cold to reduce fuel consumption and exhaust emissions.
- Drive gently! Avoid accelerating and braking too hard.



1. Option.

Volvo Car Corporation and the environment

- Drive in the highest gear possible. Low engine speeds result in lower fuel consumption.
- Ease back on the accelerator on downhill gradients.
- Use engine braking. Take your foot off the accelerator and change down.
- Avoid idling. Switch off the engine in traffic queues.
- Always dispose of environmentally hazardous waste, such as batteries and oils, in an environmentally safe manner. If uncertain about disposal, consult an authorised Volvo workshop for advice.
- Service your car regularly.



These hints will help you to reduce your fuel consumption without increasing your travel time or lessening the enjoyment of driving. Apart from being kind to your car, you'll be saving money - and the Earth's resources.

Safety	9
Instruments and controls	33
Climate control	67
Interior	79
Locks and alarm	89
Starting and driving	103
Wheels and tyres	135
Car care	153
Maintenance and service	159
Infotainment system	185
Technical data	207

Safety

Seatbelts	10
Airbag system	13
Airbags (SRS)	14
Activating/deactivating the airbag (SRS)	17
Side airbags (SIPS bags)	19
Inflatable Curtain (IC)	21
WHIPS	22
When are the safety systems activated?	24
Crash mode	25
Inspecting the airbags and inflatable curtains	26
Child safety	27

Seatbelts



Tensioning the hip strap. The belt must be positioned low down.

Always use a seatbelt

Heavy braking can have serious consequences if the seatbelts are not used. Ensure that all passengers use their seatbelts. Otherwise, rear seat passengers may be thrown forward against the backs of the front seats in a collision.

Putting on a seatbelt:

- Pull the belt out slowly and secure it by pressing the buckle into the lock. A loud "click" indicates that the belt has locked.

Releasing the belt:

- Press the red lock button and let the belt retract. If the belt does not retract fully, feed the belt in by hand so that it does not hang loose.

The belt locks and cannot be withdrawn:

- if it is pulled out too quickly
- during braking and acceleration
- if the car leans heavily.

It is important that the belt lies against the body so it can provide maximum protection. Do not lean the backrest too far back. The seatbelt is designed to protect in a normal seating position.

Keep the following in mind:

- do not use clips or anything else that can prevent the belt from fitting properly
- ensure the belt is not twisted or caught on anything
- the hip strap must be positioned low down (not over the abdomen)
- tension the hip strap over the lap by pulling the diagonal shoulder belt as illustrated.

WARNING!

The seatbelts and airbags interact. If a seatbelt is not used or is used incorrectly, this may diminish the protection provided by the airbag in the event of a collision.

WARNING!

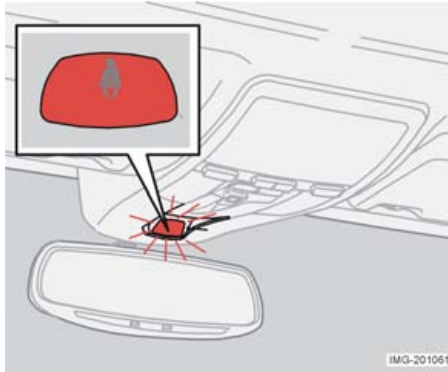
Each belt is intended for one person only.

WARNING!

Never modify or repair the seatbelts yourself. Contact an authorised Volvo workshop.

If the belt has been subjected to a major load, such as in a collision, the entire belt must be replaced. Some of the belt's protective properties may have been lost even if the belt does not appear damaged. The belt should also be replaced if it shows signs of wear or damage. The new belt must be type-approved and designed for installation at the same location as the replaced belt.

Seatbelts



Seatbelt reminder

Unbelted occupants will be reminded to fasten their seatbelts through an audio and visual reminder. The audio reminder is speed-dependent. The visual reminder is located in the roof console and the combined instrument panel. At low speed, the audio reminder will sound for the first six seconds.

The seatbelt reminder system does not cover child seats installed on the front passenger seat using the seatbelt.

Rear seat

The seatbelt reminder in the rear seat has two subfunctions:

- Provide information on which seatbelts are being used in the rear seat (shown in the information display). The message is automatically cleared after approx. 30 seconds or can be acknowledged manually by pressing the READ button.
- Provide a warning if one of the rear seatbelts is unfastened during travel. This warning takes the form of a message in the information display along with the audio/visual signal. The warning ceases when the seatbelt is re-fastened or when manually acknowledged by pressing the READ button.

The message in the information display showing which belts are in use is always available. Press the READ button to see stored messages.

Certain markets

An unbelted driver will be reminded to fasten his or her seatbelt through an audio and visual reminder. At low speed, the audio reminder will sound for the first six seconds.



Seatbelts and pregnancy

The seatbelt should always be worn during pregnancy. But it is crucial that it be worn in the correct way. The diagonal section should wrap over the shoulder then be routed between the breasts and to the side of the abdomen. The lap section should lay flat over the thighs and as low as possible under the abdomen. It must never be allowed to ride upward. Remove all slack from the belt and ensure that it fits close to the body without any twists.

As the pregnancy progresses, pregnant drivers should adjust their seats and steering wheel such that they can easily maintain control of the vehicle as they drive (which

Seatbelts

means they must be able to easily operate the foot pedals and steering wheel). Within this context, they should strive to position the seat with as large a distance as possible between their belly and the steering wheel.

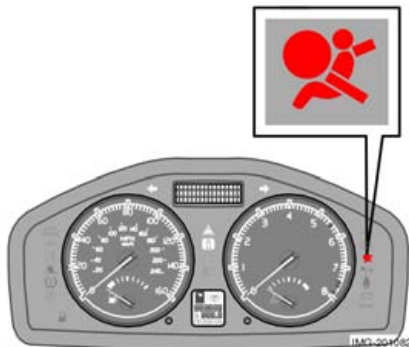


Label on seatbelts with seatbelt tensioner.

Seatbelt tensioner

All the seatbelts (except the centre rear belt) are equipped with belt tensioners. A mechanism in the belt tensioner tightens the belt around the body in the event of a sufficiently violent collision. This provides more effective restraint for passengers.

Airbag system



Warning symbol on the combined instrument panel

The airbag system¹ is continually monitored by the system control module. The warning symbol in the combined instrument panel illuminates when the ignition key is turned to position **I**, **II** or **III**. The symbol goes out after approx. seven seconds provided the airbag system¹ is fault-free.



As well as the warning symbol, a message appears on the information display. If the warning symbol malfunctions, the warning triangle comes on and the message **SRS AIRBAG SERVICE URGENT** appears on the display. Contact an authorised Volvo workshop immediately.



WARNING!

If the warning symbol for the Airbag system remains on or comes on while driving, it means that the Airbag system is not functioning fully. The symbol can indicate a fault in the seatbelt buckle, SIPS, SRS or IC system. Contact an authorised Volvo workshop immediately.

1. Includes SRS and seatbelt tensioner, SIPS and IC.

Airbags (SRS)



Airbag (SRS) on the driver's side

The car has an SRS airbag (Supplementary Restraint System) in the steering wheel to supplement the protection afforded by the seatbelt. This airbag is fitted into the centre of the steering wheel. The steering wheel is marked SRS AIRBAG.

WARNING!

The seatbelts and airbags interact. If a seatbelt is not used or is used incorrectly, this may diminish the protection provided by the airbag in the event of a collision.



Passenger airbag (SRS)

The passenger airbag¹ is fitted behind a panel above the glovebox. This panel is marked SRS AIRBAG.

WARNING!

To minimise the risk of injury if the airbag deploys, passengers must sit as upright as possible with their feet on the floor and backs against the backrest. Seatbelts must be secured.

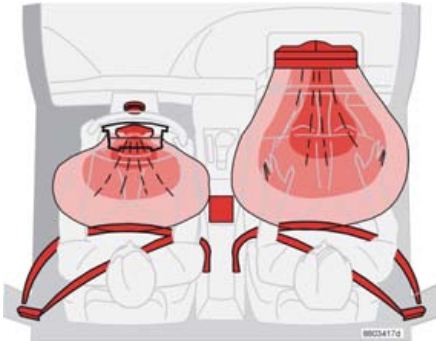
1. Not all cars have a passenger airbag (SRS). This can be unselected when the car is ordered.

WARNING!

Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated¹. Never allow a child to stand or sit in front of the front passenger seat. No one shorter than 140 cm should sit in the front passenger seat if the airbag (SRS) is activated. Failure to follow the advice given above can endanger the life of the child.

1. For information on activated/deactivated airbag (SRS), see page 17.

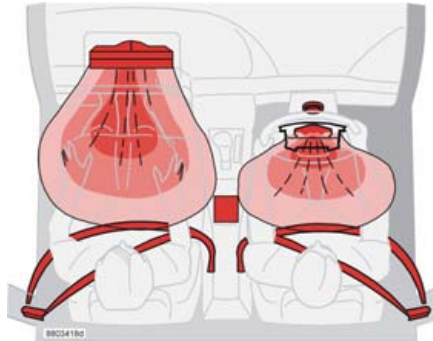
Airbags (SRS)



SRS system, left-hand drive.

SRS system

The airbag is equipped with a gas generator. A sufficiently violent collision trips sensors and ignites the gas generator, inflating the airbag with hot gas. To cushion the impact, the airbag deflates when compressed. When this occurs, smoke escapes into the car. This is completely normal. The entire process, including inflation and deflation of the airbag, occurs within tenths of a second.



SRS system, right-hand drive.

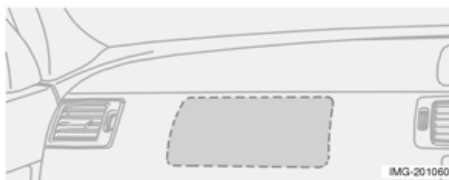
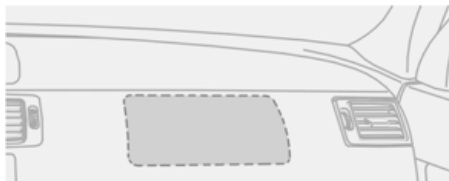
NOTE! The sensors react differently depending on the course of the collision and whether the seatbelts on the driver and passenger side are used. It is therefore possible that only one (or none) of the airbags may inflate in a collision. The SRS system senses the force of the collision on the car and adapts accordingly so that one or more airbags is deployed.

NOTE! The airbags have a function whereby their capacities are adapted to the collision force to which the vehicle is subjected.

WARNING!

Repairs must only be performed by an authorised Volvo workshop. Work on the SRS system can cause malfunction and result in serious personal injury.

Airbags (SRS)



Location of the passenger airbag in left-hand drive and right-hand drive cars.



WARNING!

Never interfere with SRS components in the steering wheel or the panel above the glovebox.

Objects and accessories must not be positioned or glued on or near the SRS AIRBAG panel (above the glovebox) or in the area affected by a deployed airbag.

Activating/deactivating the airbag (SRS)



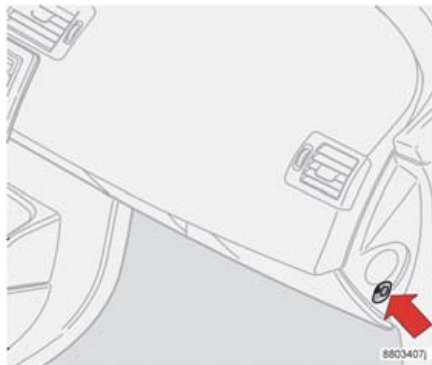
Indicator showing that the passenger airbag (SRS) is deactivated.

PACOS (option)

The airbag (SRS) for the front passenger seat can be deactivated using a switch. This is necessary if a child seat is to be fitted there for example.

Indicator

A text message on the roof panel indicates that the passenger airbag (SRS) is deactivated.



Switch for PACOS (Passenger Airbag Cut Off Switch).

Activating/deactivating

The switch is located on the passenger end of the dashboard and is accessible when the passenger door is open. Check that the switch is in the required position. Volvo recommends that the ignition key be used to change position (Other items with a shape similar to a key can be used).



WARNING!

If the car is equipped with a front passenger airbag (SRS), but does not have PACOS, the airbag will always be activated.



WARNING!

Activated airbag (passenger seat):
Never place a child in a child seat or on a booster cushion in the front passenger seat when the airbag is activated. This also applies to anyone shorter than 140 cm.

Deactivated airbag (passenger seat):
No one taller than 140 cm should ever sit in the front passenger seat when the airbag is deactivated.
Failure to follow the advice given above can endanger life.

Activating/deactivating the airbag (SRS)



Switch for SRS in ON position.

Switch position

ON = Airbag (SRS) activated. With the switch in this position, persons taller than 140 cm can sit in the front passenger seat, but never children in a child seat or on a booster cushion.



Switch for SRS in OFF position.

OFF = Airbag (SRS) is deactivated. With the switch in this position, children in a child seat or on a booster cushion can sit in the front passenger seat, but never persons taller than 140 cm.



WARNING!

Do not allow anyone to sit in the front passenger seat if the text message in the roof panel indicates that the airbag (SRS) is deactivated and if the warning symbol for the AIRBAG system is also displayed on the combined instrument panel. This indicates that there has been a severe malfunction. Contact an authorised Volvo workshop as soon as possible.

Side airbags (SIPS bags)



Side airbag locations.

Side airbags - SIPS bags

A large proportion of the collision force is transferred by the SIPS (Side Impact Protection System) to beams, pillars, the floor, the roof and other structural parts of the body. The side airbags at the driver's and front passenger seats protect the chest area and are an important part of the SIPS. The side airbags are located in the front seat backrests.



Inflated side airbag.

WARNING!

Side airbags are a supplement to the SIPS system. Always wear a seatbelt.

WARNING!

Repairs must only be performed by an authorised Volvo workshop. Work on the SIPS system can cause malfunction and result in serious personal injury.

WARNING!

Do not put objects in the area between the outside of the seat and the door panel, since this area is required by the side airbag.

WARNING!

Use only Volvo genuine car seat covers, or seat covers approved by Volvo. Other seat covers may impede the operation of the side air bags.

Child seats and side airbags

The side airbag does not diminish the protection provided by the car to children seated in a child seat or on a booster cushion.

A child seat or booster cushion can be placed on the front passenger seat provided that the car does not have an activated¹ passenger airbag.

1. For information on activated/deactivated airbag (SRS), see page 17.

Side airbags (SIPS bags)



Left-hand drive.

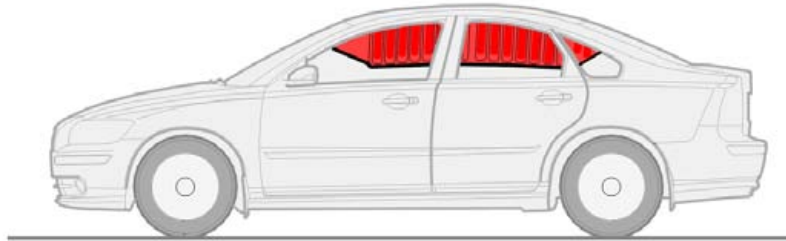


Right-hand drive.

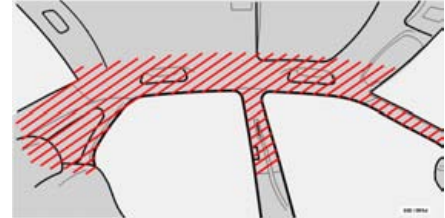
SIPS bags

The side airbag is equipped with a gas generator. A sufficiently violent collision trips the sensors, which ignite the gas generator, inflating the side airbag. The airbag inflates between the occupant and the door panel and thereby cushions the initial impact while deflating. The side airbag is only normally deployed on the side of the collision.

Inflatable Curtain (IC)



IMG-201140



Properties

The inflatable curtain, IC (Inflatable Curtain), is a supplement to the SIPS system. It is concealed in the headlining along both sides of the roof and protects both front and rear seat passengers. The inflatable curtain is activated by sensors in the event of a sufficiently violent collision. When deployed, the inflatable curtain inflates. The inflatable curtain helps to prevent the driver and passengers from striking their heads on the inside of the car during a collision.

WARNING!

Never hang or fasten anything on the roof handles. The hook is only intended for light outer garments (not for hard objects such as umbrellas).

Do not screw or fit anything to the headlining, door pillars or side panels. This could compromise the intended protection. Only use Volvo genuine parts that are approved for placement in these areas.

WARNING!

Do not load the car higher than 50 mm under the top edge of the rear passenger windows in order to avoid affecting the protection of the inflatable curtain in the event of a side-impact accident.

WARNING!

The inflatable curtain is a supplement to the seatbelts. Always use a seatbelt.

WHIPS



Protection against whiplash injury - WHIPS

The whiplash protection system (WHIPS) consists of energy absorbing backrests and specially designed head restraints for the front seats. The system is actuated by a rear-end collision, where the angle and speed of the collision, and the nature of the colliding vehicle all have an influence.

WARNING!

The WHIPS system is a supplement to the seatbelts. Always wear your seatbelt.

Properties of the seat

When the WHIPS system is deployed, the front seat backrests are lowered backward to alter the seating position of the driver and front seat passenger. This reduces the risk of whiplash injury.

WARNING!

Never modify or repair the seat or WHIPS system yourself. Contact an authorised Volvo workshop.

WHIPS system and child seats/ booster cushions

The WHIPS system does not diminish the protection provided by the car to children seated in a child seat or on a booster cushion.

Correct seating position

For the best possible protection, the driver and front seat passenger should sit in the centre of the seat with as little space as possible between the head and the head restraint.

WHIPS



Do not obstruct the WHIPS system

WARNING!

Do not squeeze rigid objects between the rear seat cushion and the front seat backrest. Make sure you do not to obstruct the function of the WHIPS system.

WARNING!

If a rear seat backrest is folded down, the corresponding front seat must be moved forward so that it does not touch the folded backrest.

WARNING!

If a seat has been subjected to extreme forces, such as due to a rear collision, the WHIPS system must be checked by an authorised Volvo workshop. Some of the WHIPS system's protective properties may have been lost even if the seat appears undamaged. Contact an authorised Volvo workshop to have the system checked after even a minor rear-end collision.

When are the safety systems activated?

System	Triggered
Seatbelt tensioner	In a frontal collision and/or side-impact accident and/or overturning.
Airbags (SRS)	In a frontal collision ¹ .
Side airbags (SIPS)	In a side-impact accident ¹ .
Inflatable Curtain IC	In a side-impact accident ¹ .
Whiplash protection WHIPS	In a rear-end collision.

1. The bodywork of the car could be greatly deformed in a collision without airbag deployment. A number of factors such as the rigidity and weight of the object hit, the speed of the car, the angle of the collision etc. affects how the different safety systems of the car are activated.

If the airbags have been deployed, the following is recommended:

- Have the car transported to an authorised Volvo workshop. Do not drive with deployed airbags.
- Let an authorised Volvo workshop replace components in the car's safety system.
- Always contact a doctor.

NOTE! The SRS, SIPS, IC and belt tensioner systems are deployed only once during a collision.



WARNING!

The AIRBAG control module is located in the centre console. If the centre console is drenched with water or other liquid, disconnect the battery cables. Do not attempt to start the car since the airbags may deploy. Have the car transported to an authorised Volvo workshop.



WARNING!

Never drive with deployed airbags. They can make steering difficult. Other safety systems may also be damaged. The smoke and dust created when the airbags are deployed can cause skin and eye irritation after intensive exposure. In case of irritation, wash with cold water. The rapid deployment sequence and airbag fabric may cause friction and skin burns.

Crash mode



Driving after a collision

If the car is involved in a collision, the text CRASH MODE-SEE MANUAL may appear on the information display. This means that the car has reduced functionality. CRASH MODE is a protective state that is enforced when the collision may have damaged the car's vital functions, such as the fuel lines, sensors for one of the safety systems, or the brake system.

Attempting to start the car

First, check that no fuel is leaking from the car. There should be no smell of fuel.

If everything seems normal and you have checked for indications of fuel leakage, you may attempt to start the car.

Firstly, remove the ignition key and then reinsert it. The car's electronics will then try to reset themselves to normal mode. Then try to start the car. If CRASH MODE is still shown in the display then the car must not be driven or towed. Even if the car appears to be driveable, hidden damage may make the car impossible to control once moving.

Moving the car

If NORMAL MODE is shown after CRASH MODE has been reset, the car can be moved carefully out of a dangerous position. Do not move the car further than necessary.

WARNING!

Never, under any circumstances, attempt to restart the car if it smells of fuel when the CRASH MODE message is displayed. Leave the car at once.

WARNING!

If the car is in CRASH MODE it must not be towed. It must be transported to an authorised Volvo workshop.

WARNING!

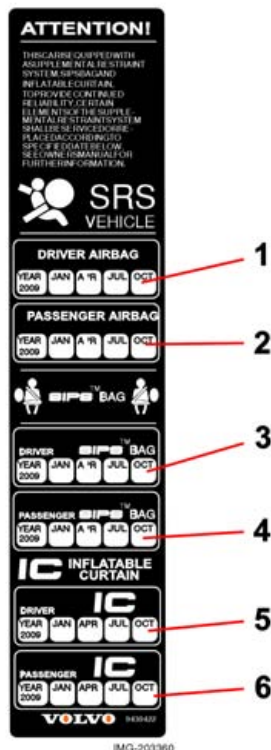
Never attempt to repair your car or reset the electronics yourself if the car has been in CRASH MODE. This could result in personal injury or the car not functioning as normal. Always allow an authorised Volvo workshop to check and restore the car to normal status after CRASH MODE has been displayed.

Inspecting the airbags and inflatable curtains

Inspection intervals

The decal on the door pillar(s) shows the dates (year, month) when you should contact an authorised Volvo workshop to inspect and, if necessary, replace the airbags, belt tensioners and inflatable curtains. If you have questions concerning the systems, contact an authorised Volvo workshop.

1. Driver airbag
2. Front passenger airbag
3. Side airbag on the driver's side
4. Side airbag on the passenger side
5. Inflatable curtain on the driver's side
6. Inflatable curtain on the passenger side



This decal is located in the rear left door opening.

Child safety



Children should sit comfortably and safely

The position of a child in the car and the choice of equipment is dictated by the child's weight and size, for more information see page 29.

Children who are shorter than 150 cm must be carried in adequate child protection.

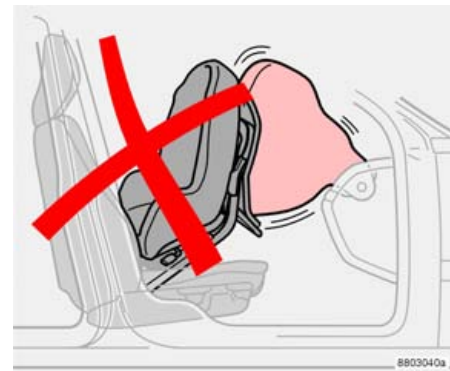
NOTE! Regulations regarding the placement of children in cars vary from country to country. Check what laws apply.

Children of all ages and sizes must always sit correctly secured in the car. Never allow a child to sit on the knee of a passenger.

Volvo's own child safety equipment is designed for your car. Use Volvo genuine equipment to best ensure that the mounting points and attachments are correctly positioned and are sufficiently strong.

You may place:

- a child seat or booster cushion on the front passenger seat, provided the passenger airbag is not activated¹.
- a rear-facing child seat in the rear seat that uses the back of the front seat as support.



Child seats and airbags are not compatible.

Child seats and airbags

Always place a child in the rear seat if the passenger airbag is activated¹. A child in a child seat on the front passenger seat may suffer serious injury if the airbag deploys.

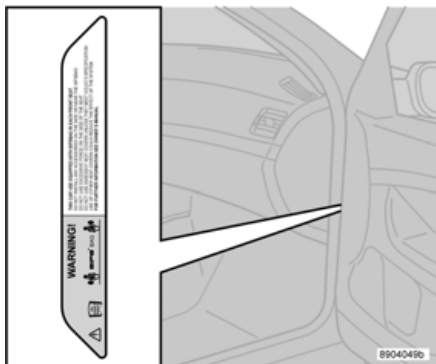


WARNING!

Persons shorter than 140 cm may only sit in the front passenger seat if the passenger airbag is deactivated.

1. For information on activated/deactivated airbag (SRS), see page 17.

Child safety



Location of airbag decal in door opening on front passenger side.



Decal located on instrument panel end face.



Decal located on instrument panel end face (Australia only).

WARNING!

Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated¹. Failure to follow this advice can endanger the life of the child.

1. For information on activated/deactivated airbag (SRS), see page 17.

Child safety

Placement of children in the car

Weight/age	Front seat ¹	Outer rear seat	Centre rear seat
<10 kg (0–9 months)	Rear-facing child seat, secured with seatbelt and straps. Use a protective cushion between the child seat and the dashboard. L ² : Type approval no. E5 03135	Rear-facing child seat, secured with seatbelt, support legs and straps. L ² : Type approval no. E5 03135	Rear-facing child seat, secured with seatbelt, support legs and straps. L ² : Type approval no. E5 03135
9–18 kg (9–36 months)	Rear-facing child seat, secured with seatbelt and straps. Use a protective cushion between the child seat and the dashboard. L ² : Type approval no. E5 03135	Rear-facing child seat, secured with seatbelt, support legs and straps. L ² : Type approval no. E5 03135	Rear-facing child seat, secured with seatbelt, support legs and straps. L ² : Type approval no. E5 03135
15–36 kg (3–12 years)	Booster cushion with or without backrest. L ² : Type approval no. E5 03139	Alternative: Booster cushion with or without backrest. L ² : Type approval no. E5 03139 Integrated booster cushion. L ² : Type approval no. E5 03168	Booster cushion with or without backrest. L ² : Type approval no. E5 03139

1. For information on activated/deactivated airbag (SRS), see page 17.

2. L: Suitable for certain child seats as listed in the specified type approval. Child seats can be vehicle-specific, limited, semi-universal or universal.

Child safety



WARNING!

Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated.

No one shorter than 140 cm should sit in the front passenger seat if the airbag (SRS) is activated¹.

Failure to follow the advice given above can endanger the life of the child.

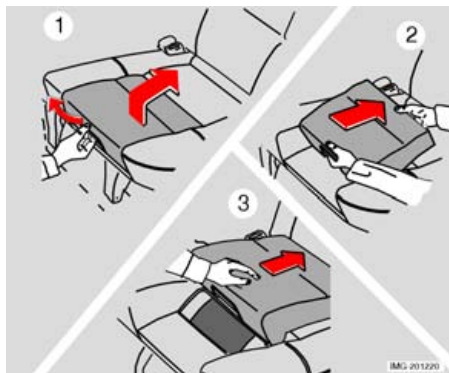
1. For information on activated/deactivated airbag (SRS), see page 17.

Integrated booster cushion (option)

Volvo's integrated booster cushion for the outer rear seats is specially designed to provide optimum safety for children.

Combined with the regular seatbelts, the booster cushion is approved for children weighing between 15 and 36 kg.

Child safety



Raising the booster cushion

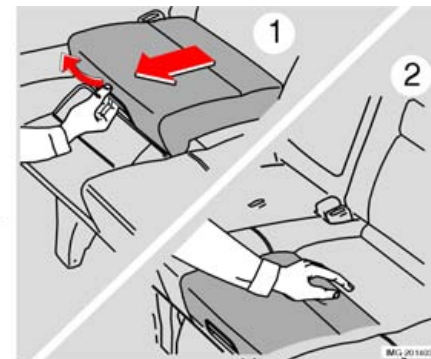
- Pull that handle to raise the booster cushion (1).
- Grasp the cushion with both hands and push it backwards (2).
- Push until it locks in place (3).

WARNING!

The booster cushion must be in the locked position before the child is placed there.

Check that:

- the booster cushion is locked in position
- the seatbelt is in contact with the child's body and is not slack or twisted, and that the belt is positioned correctly across the shoulder
- the hip strap is low across the hips for optimum protection
- the belt does not touch the child's throat or lie below the shoulder
- Carefully adjust the position of the head restraint to suit the child.



Lowering the booster cushion

- Pull the handle (1).
- Lower the seat and press until it locks (2).

NOTE! Remember to stow away the booster cushion before lowering the rear seat backrest.



WARNING!

Repair or replacement should only be performed by an authorised Volvo workshop. Do not make any modifications or additions to the booster cushion. If an integrated booster cushion has been subjected to a major load, such as in conjunction with a collision, the entire booster cushion must be replaced. Even if the booster cushion appears to be undamaged, it may not afford the same level of protection. The booster cushion must also be replaced if it is heavily worn.

Child safety

Fitting a child seat

Volvo has child safety products that are designed for and tested by Volvo.

When using other products that are available on the market, it is important to read the fitting instructions included with the product.

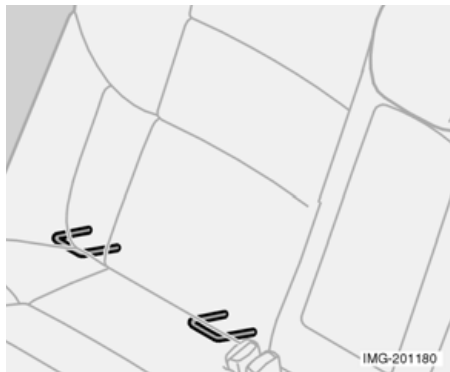
- Do not attach the straps for the child seat to the horizontal adjustment bar, springs, rails or beams under the seat. Sharp edges can damage the straps.
- Allow the back of the child seat to rest against the dashboard. This applies to cars without a passenger airbag, or where the airbag is deactivated.



WARNING!

Never place the child seat in the front seat if the car is equipped with an activated¹ front passenger airbag. If problems arise when fitting child safety products, contact the manufacturer for clearer instructions.

1. For information on activated/deactivated airbag (SRS), see page 17.



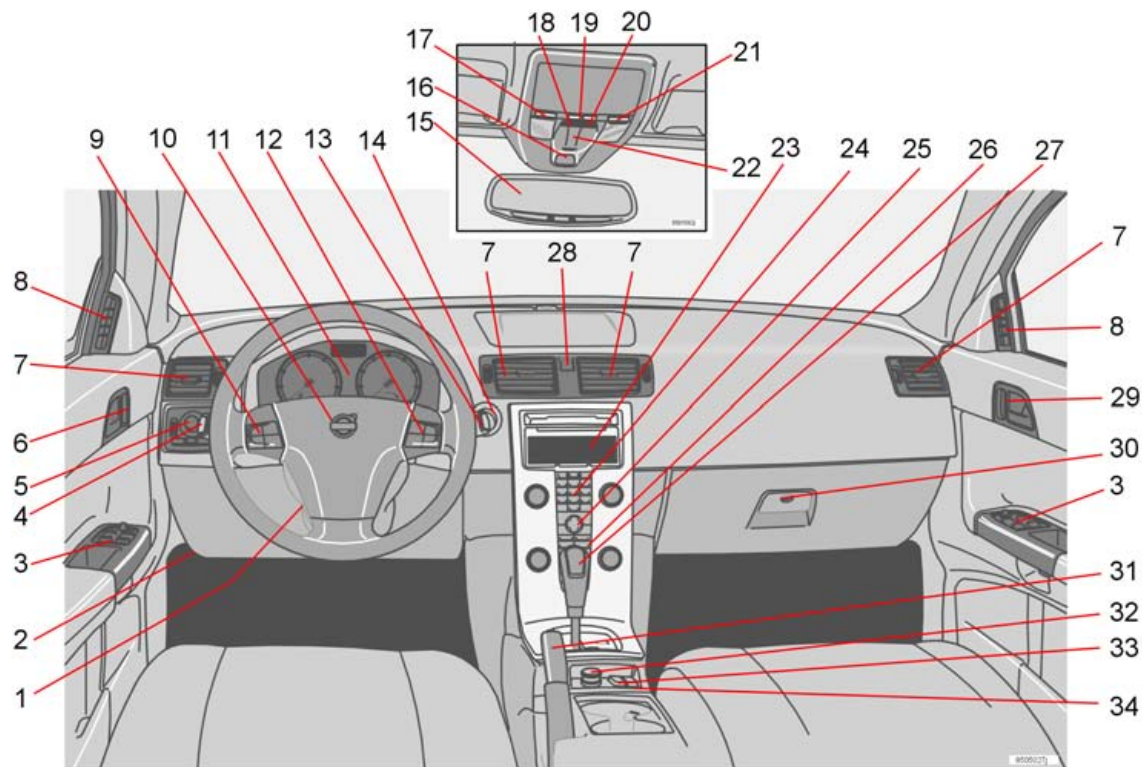
ISOFIX fixture system for child seats (option)

The outer rear seats have ISOFIX attachment points. Contact a Volvo dealer for further information on child safety equipment.

Instruments and controls

Overview, left-hand drive cars	34
Overview, right-hand drive cars	36
Driver's door control panel	38
Combined instrument panel	39
Indicator and warning symbols	40
Information display	44
Electrical socket and switches on centre console	45
Lighting panel	46
Left-hand stalk switch	47
Right-hand stalk switch	49
Cruise control (option)	51
Steering wheel keypad (option)	52
Steering wheel adjustment, hazard warning flashers	53
Parking brake, electrical socket	54
Power windows	55
Rearview and door mirrors	58
Power sunroof (option)	61
Personal preferences	64

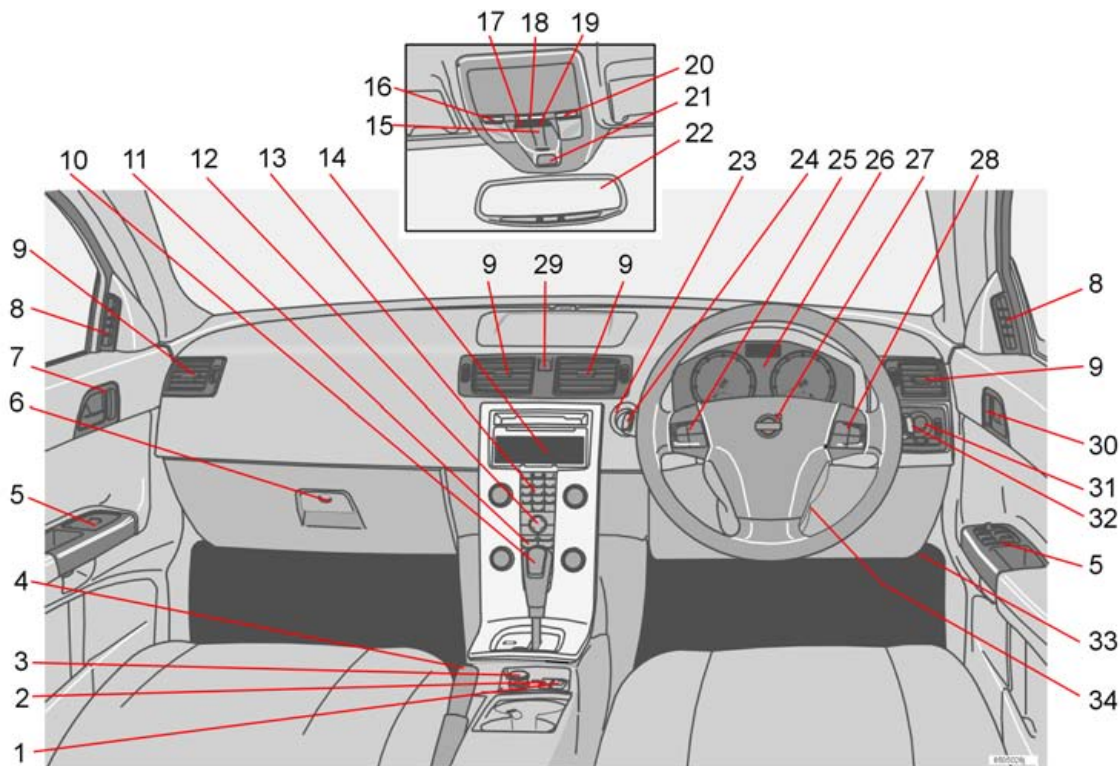
Overview, left-hand drive cars



Overview, left-hand drive cars

1. Steering wheel adjustment
2. Bonnet release
3. Control panel
4. Direction indicators, main beam, trip computer
5. Lighting, fuel filler flap opener
6. Door handle, central locking
7. Air vents in dashboard
8. Air vent for side window
9. Cruise control
10. Horn, airbag
11. Combined instrument panel
12. Keypad for infotainment system
13. Windscreen wipers and washer, headlamp washers
14. Ignition switch
15. Interior rearview mirror
16. Seatbelt reminder
17. Interior lighting for left-hand side
18. Deactivation of alarm detectors, deadlocks
19. Switch for interior lighting
20. Position of accessory switch
21. Interior lighting for right-hand side
22. Sunroof controls
23. Display for climate control and infotainment system
24. Infotainment system
25. Controls for climate control, infotainment system and personal preferences
26. Climate control
27. Gear lever
28. Hazard warning flashers
29. Door handle
30. Glovebox
31. Parking brake
32. Electrical socket/cigarette lighter
33. STC or DSTC stability system
34. Switch, optional equipment

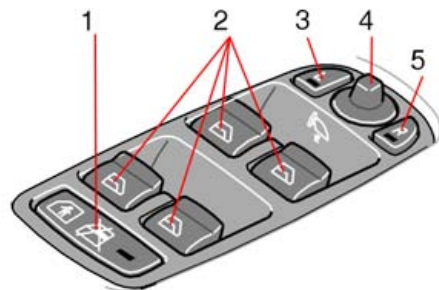
Overview, right-hand drive cars



Overview, right-hand drive cars

1. Switch for retrofitted accessory
2. STC or DSTC stability system
3. Electrical socket, cigarette lighter
4. Parking brake
5. Control panel
6. Glovebox
7. Door handle
8. Air vent for side window
9. Air vents in dashboard
10. Gear lever
11. Climate control
12. Controls for climate control, infotainment system and personal preferences
13. Infotainment system
14. Display for climate control and infotainment system
15. Sunroof controls
16. Interior lighting for left-hand side
17. Deactivation of alarm detectors, deadlocks
18. Switch for interior lighting
19. Switch for retrofitted accessory
20. Interior lighting for right-hand side
21. Seatbelt reminder
22. Interior rearview mirror
23. Ignition switch
24. Windscreen wipers and washers, headlamp washers
25. Cruise control
26. Combined instrument panel
27. Horn, airbag
28. Keypad for infotainment system
29. Hazard warning flashers
30. Door handle, central locking
31. Lighting, fuel filler flap opener
32. Direction indicators, main beam, trip computer
33. Bonnet release
34. Steering wheel adjustment

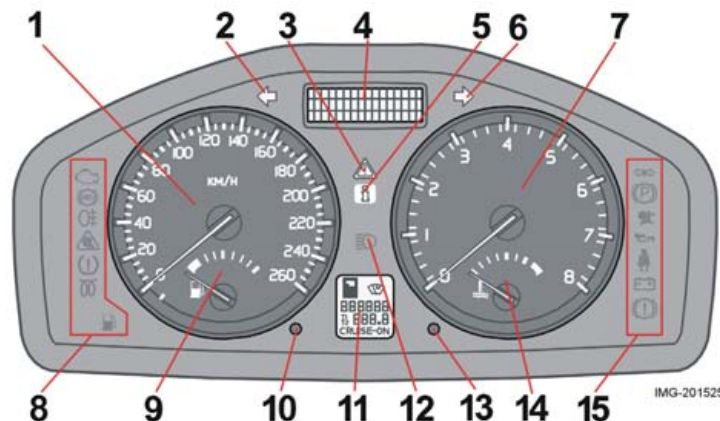
Driver's door control panel



IMG-203441

1. Blocking switch for rear power windows (standard)
Electric child locks (option)
2. Power windows
3. Door mirror, left-hand side
4. Door mirrors, setting
5. Door mirror, right-hand side

Combined instrument panel



1. Speedometer
2. Direction indicators, left
3. Warning symbol
4. Information display – The display presents information and warning messages, outside temperature and the time. When the ambient temperature is between +2 °C and –5 °C, a snowflake symbol appears on the display. This warns of icy roads. The outside temperature gauge may show a slightly high reading after the car has been stationary.
5. Information symbol
6. Direction indicators, right
7. Tachometer – Indicates engine speed in thousands of revolutions per minute (rpm).
8. Indicator and warning symbols
9. Fuel gauge
10. Button for trip meter – Used to measure short distances. Press the button to switch between trip meters T1 and T2. Press and hold (more than 2 seconds) to zero the active trip meter.
11. Display – Display for automatic gear position, rain sensor, odometer, trip meter and cruise control.
12. Main beam indicator
13. Knob for clock – Turn the knob to adjust the time.
14. Temperature gauge – Displays the temperature of the engine cooling system. A message will appear on the display if the temperature becomes too high and the gauge goes into the red zone. Bear in mind that extra lights placed in front of the air intake, for example, reduce the cooling capacity at high outside temperatures and high engine loads.
15. Indicator and warning symbols

Indicator and warning symbols

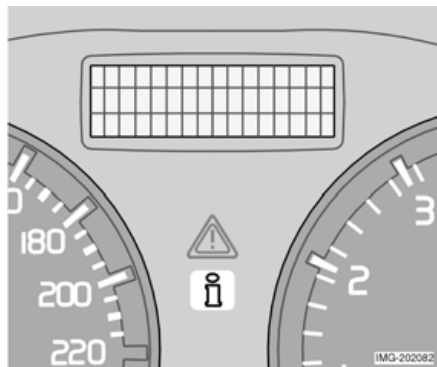
Functionality check, symbols

All indicator and warning symbols illuminate when the ignition key is turned to position **II** before starting. This is to check that the symbols are working. When the engine starts, all the symbols should go out except the handbrake symbol, which extinguishes when the handbrake is released.



If the engine does not start within five seconds, all symbols extinguish except the symbols for a fault in the car's emissions system and for low oil pressure. Certain symbols may

not function, depending on the car's specifications.



Symbols in the centre of the instrument panel



The red warning symbol illuminates when a fault has been indicated which could affect the safety and/or driveability of the car. An explanatory text is shown on the information display at the same time. The symbol and message text remain visible until the fault has been rectified. The warning symbol can also illuminate in conjunction with other symbols.

- Stop in a safe place. Do not drive the car further.

- Read the information on the information display.
- Rectify the fault as instructed or contact an authorised Volvo workshop.

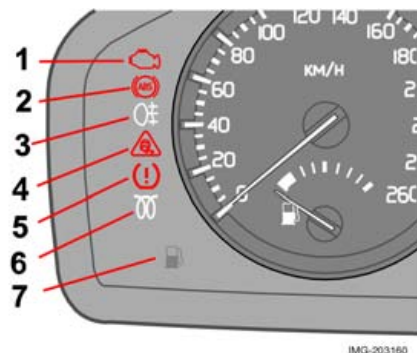


When one of the car's systems does not behave as intended, the yellow information symbol illuminates and a text appears in the display. The message text is cleared using the READ button, see page 44, or disappears automatically after two minutes.

The yellow information symbol can also come on in conjunction with other symbols.

NOTE! When the message text TIME FOR REGULAR SERVICE is shown, the symbol lamp and message text are cleared using the READ button, or disappear automatically after two minutes.

Indicator and warning symbols



IMG-203180

Indicator symbols – left-hand side

1. Fault in car's emissions system



Drive to an authorised Volvo workshop to have the system checked.

2. ABS fault



If this symbol lights, the system is not working. The car's regular brake system continues to work, but without the ABS function.

- Stop the car in a safe place and turn off the engine.
- Restart the engine.

- Drive to an authorised Volvo workshop to have the ABS checked if the symbol remains lit.

3. Rear fog lamp



This symbol is lit when the rear fog lamp is on.

4. STC or DSTC stability system



A flashing symbol indicates that the stability system is operating.

5. No function

6. Engine preheater (diesel)

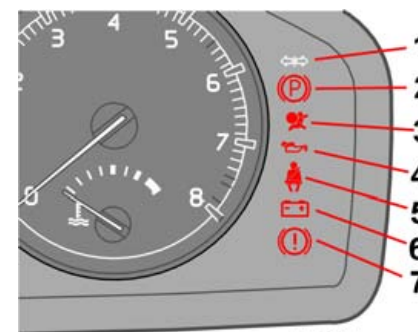


This symbol is lit during engine preheating. Preheating occurs when the temperature is below – 2 °C. The car can be started once the symbol goes out.

7. Low level in fuel tank



This symbol lights when there are approximately 8 litres of usable fuel left in a petrol-engined car, or 7 litres in a diesel-engined car.



IMG-203480

Indicator symbols – right-hand side

1. Indicator symbol for trailer



This symbol flashes when the direction indicators are used and a trailer is coupled. If the symbol does not flash, one of the lamps on the trailer or the car is defective.

2. Parking brake applied



The lamp comes on when the parking brake is applied. Always pull the parking brake lever to the end position.

NOTE! The lamp comes on irrespective of how hard the parking brake is applied.

Indicator and warning symbols

3. Airbags – SRS



If this symbol remains on or comes on while driving, it means a fault has been detected in the seatbelt buckle, SRS, SIPS, or IC system. Drive directly to an authorised Volvo workshop to have the system checked.

4. Low oil pressure



If this symbol lights up while driving, the engine oil pressure is too low. Stop the engine immediately and check the engine oil level, top up if necessary. If the symbol lights up and the oil level is normal, contact an authorised Volvo workshop.

5. Seatbelt reminder



This symbol lights if someone in a front seat has not put on their seatbelt or if someone in a rear seat has taken off their seatbelt.

6. Alternator not charging



If this symbol lights while driving, a fault has occurred in the electrical system. Contact an authorised Volvo workshop.

7. Fault in brake system



If this symbol lights, the brake fluid level may be too low.

- Stop the car in a safe place and check the level in the brake fluid reservoir, see page 167. If the level in the reservoir is below MIN, the car should not be driven any further. Have the car transported to an authorised Volvo workshop to have the brake system checked.



If the BRAKE and ABS symbols come on at the same time, there may be a fault in the brake force distribution system.



–Stop the car in a safe place and turn off the engine.

- Restart the engine.
- If both symbols extinguish, continue driving.
- If the symbols remain on, check the level in the brake fluid reservoir. See page 168.
- If the brake fluid level is normal but the symbols are still lit, the car can be driven, with great care, to an authorised Volvo workshop to have the brake system checked.
- If the level in the reservoir is below MIN, the car should not be driven any further. Have the car transported to an authorised Volvo workshop to have the brake system checked.



WARNING!

If the BRAKE and ABS symbols are illuminated at the same time, there is a risk that the rear end will skid during heavy braking.

Indicator and warning symbols

Reminder – doors not closed

If one of the doors, the bonnet¹ or the tailgate is not properly closed, the driver will be reminded of this.

Low speed



If the car moves at a speed less than approx. 7 km/h, the information symbol illuminates and DRIVER DOOR OPEN, PASSENGER DOOR OPEN,

LEFT REAR DOOR OPEN, BONNET OPEN or RIGHT REAR DOOR OPEN is shown in the display. Stop the car as soon as possible and close the door or bonnet.

High speed



If the car is moving faster than approx. 7 km/h, the symbol illuminates and one of the texts indicated in the previous

paragraph appears in the display.

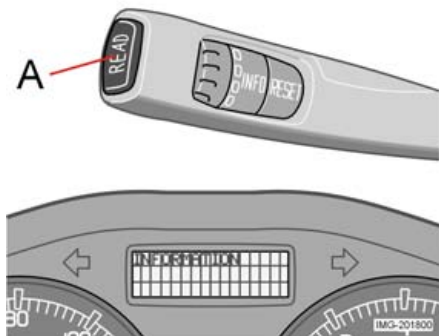
Tailgate reminder



If the tailgate is open, this information symbol will come on and TAILGATE OPEN will appear on the display.

1. Only cars with alarms

Information display



Messages

When a warning or indicator symbol come, a message appears on the information display.

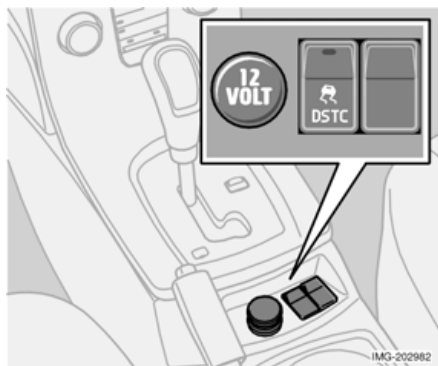
- Press the READ button (A).

Switch between messages with the READ button. Fault messages are stored in the memory until the fault is rectified.

NOTE! If a warning message appears while you are using the trip computer, the message must be read (press READ) before the previous activity can be resumed.

Message	Specification
STOP SAFELY	Stop and switch off the engine. Serious risk of damage.
STOP ENGINE	Stop and switch off the engine. Serious risk of damage.
SERVICE URGENT	Have the car checked by an authorised Volvo workshop immediately.
SEE MANUAL	Read the owner's manual.
SERVICE REQUIRED	Have the car checked by an authorised Volvo workshop as soon as possible.
TIME FOR REGULAR SERVICE	Time for regular service at an authorised Volvo workshop. The timing is determined by the number of kilometres driven, number of months since the last service and engine running time.
CHECK OIL LEVEL	Check the oil level. The message is shown every 10 000 km. For information on checking the oil level, see page 164.
SOOT FILTER FULL - SEE MANUAL	Diesel particle filter requires regeneration. See page 106.

Electrical socket and switches on centre console



Electrical socket, DSTC system, extra equipment

12 V electrical socket

The electrical socket can be used for 12 V accessories, such as mobile phone chargers and coolers. The maximum current is 10 A. For the socket to supply current, the ignition key must be in at least position I.

WARNING!

Always leave the plug in the socket when the socket is not in use.

Cigarette lighter (option)

Activate the lighter by pushing in the button. The button pops out when the lighter is hot. Pull out the lighter and light a cigarette on the heated coils.

STC or DSTC stability system¹

The stability control system comes on automatically when the car is started.

To suppress the stability control system:

- Press and hold the button for at least half a second.

For further information, see page 117.



WARNING!

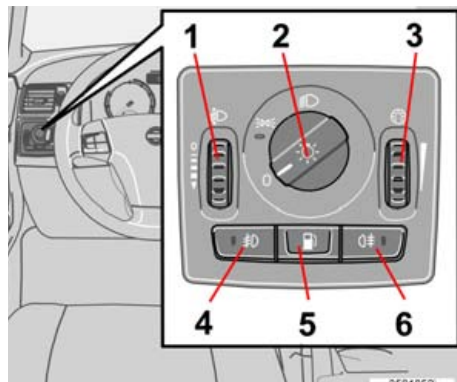
Suppressing the stability control system alters the driving characteristics of the car.

Extra equipment

Space for an extra switch for retrofitted equipment.

1. Option on certain markets

Lighting panel



Headlamp levelling

The load in the car changes the vertical alignment of the headlamp beam, which could dazzle oncoming motorists. Avoid this by adjusting the height of the beam.

- Turn the ignition key to position **II**.
- Turn the headlamp control (2) to one of the end positions.
- Roll the control up or down (1) to raise or lower beam alignment.

Cars with Bi-Xenon headlamps¹ have automatic headlamp levelling, so there is no control (1).

Position/parking lamps

The position lamps/parking lamps can be switched on irrespective of ignition key position.

- Turn the lights switch (2) to the centre position.

In ignition key position **II** the position lamps/parking lamps are always on. The number plate lighting is switched on at the same time as the position lamps/parking lamps.

Headlamps

Automatic dipped beam (certain countries)

Dipped beam comes on automatically when the ignition key is turned to position **II**, except when the headlamp control (2) is in the centre position. If necessary, the automatic dipped beam can be deactivated by an authorised Volvo workshop.

Manual dipped beam

- Turn the ignition key to position **II**.
- Turn the headlamp control (2) clockwise to the end position.

Main beam

- Turn the ignition key to position **II**.
- Turn the headlamp control (2) clockwise to the end position.
- Move the left-hand stalk switch towards the steering wheel to the end position and release it, see page 47.

Fuel filler flap

Button (5) opens the fuel filler flap.

Fog lamp

NOTE! Regulations for use of fog lamps vary from country to country.

Front fog lamps (option)

The front fog lamps can be switched on along with the headlamps or the position lamps/parking lamps.

- Press the button (4).

The LED in the button (4) lights when the front fog lamps are switched on.

Rear fog lamp

The rear fog lamp can only be switched on with the headlamps or the front fog lamps.

- Press the button (6).

The rear fog lamp indicator symbol in the combined instrument panel and the LED in the button (6) come on when the rear fog lamp is switched on.

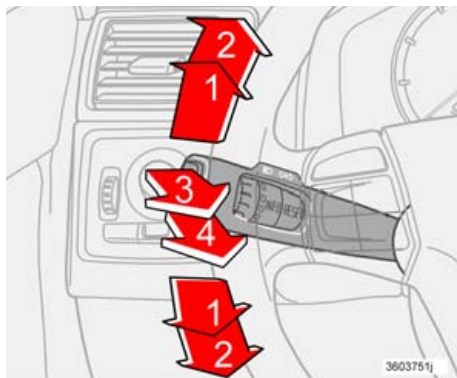
Instrument lighting

The instrument lighting is switched on when the ignition key is in position **II** and the headlamp control (2) is in one of the end positions. The lighting is automatically dimmed during the day and can be controlled manually at night.

- Roll the control up or down (3) for brighter or dimmer lighting.

1. Option.

Left-hand stalk switch



Stalk switch positions

1. Short flash sequence, direction indicators
2. Continuous flash, direction indicators
3. Main beam flash
4. Switching, main and dipped beam, and home safe lighting

Direction indicators

Continuous flash sequence

- Move the stalk switch up or down to end position (2).

The stalk switch remains in its end position and is moved back manually, or automatically by steering wheel movement.

Short flash sequence

- Move the stalk switch up or down to position (1) and release.

The direction indicators flash three times and the stalk switch returns to its home position.

Switching, main and dipped beam

The ignition key must be in position **II** for main beam to be switched on.

- Turn the headlamp control clockwise to the end position, see page 46.
- Move the stalk switch towards the steering wheel to the end position (4) and release.

Main beam flash

- Move the stalk switch gently towards the steering wheel to position (3).

Main beam comes on until the stalk switch is released.

Home safe lighting

Some exterior lights can be kept lit and serve as home safe lighting after the car is locked.

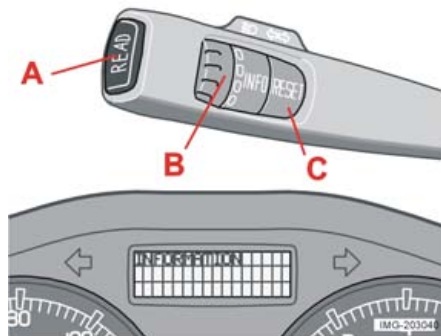
The standard delay is 30 seconds¹, but can be changed to 60 or 90 seconds; see page 65.

- Remove the key from the ignition switch.

1. Factory settings.

- Move the stalk switch towards the steering wheel to the end position (4) and release.
- Get out of the car and lock the door.

Left-hand stalk switch



Trip computer (option)

Controls

To scroll through trip computer information, turn the thumbwheel (B) in steps, either upward or downward. Continue turning to return to the starting point.

NOTE! If a warning message interrupts while you are using the trip computer, this message must be acknowledged. Acknowledge by pressing the READ button (A) and revert to the trip computer function.

Functions

The trip computer displays the following information:

- AVERAGE SPEED
- SPEED IN MILES PER HOUR¹
- CURRENT FUEL CONSUMPTION
- AVERAGE FUEL CONSUMPTION
- RANGE TO EMPTY FUEL TANK

Average speed

When the ignition is switched off, the average speed is stored and used as the basis of the new value when you continue driving. Reset using the RESET button (C).

Speed in miles per hour¹

Current speed is displayed in mph.

Current fuel consumption

Current fuel consumption is calculated every second. The information on the display is updated every couple of seconds. When the car is stationary, "----" appears on the display. During the time that regeneration is underway fuel consumption may increase.² See page 106.

Average fuel consumption

The average fuel consumption since the last reset (RESET). The average fuel

consumption is stored when the ignition is switched off and remains until the function is reset. Reset using the RESET button (C).

NOTE! There may be a slight error in the reading if a fuel-driven heater is used.

Range to empty fuel tank

The range to empty is calculated based on the average fuel consumption over the last 30 km. When the range to empty is shorter than 20 km then "----" is shown on the display.

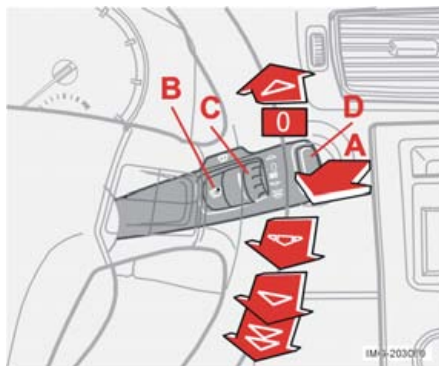
NOTE! There may be a slight error in the reading if fuel consumption is changed due to a change in driving style or if a fuel-driven heater is used for example.

Resetting

- Select average speed or average fuel consumption.
- Press and hold the RESET button (C) for at least five seconds to reset the average speed and average fuel consumption at the same time.

1. Certain countries.
2. Only applies to diesel cars with particle filter.

Right-hand stalk switch



Windscreen wipers

- A. Windscreen and headlamp washers
- B. Rain sensor – On/Off
- C. Thumbwheel
- D. No function

Windscreen wipers off



The windscreen wipers are off when the stalk switch is in position **0**.

Single sweep



Raise the stalk switch to make a single sweep.

Intermittent wiping



The delay between sweeps can be adjusted. Turn the thumbwheel (C) upward for a shorter interval between sweeps. Turn it downward to increase the delay.

Continuous wiping



The wipers sweep at normal speed.



The wipers sweep at high speed.

IMPORTANT!

Use plenty of washer fluid when the wipers are cleaning the windscreen. The windscreen must be wet when the windscreen wipers are operating.

Windscreen/headlamp washer

Pull the stalk switch towards the steering wheel to start the windscreen and headlamp washers. The wipers will make three more sweeps once the stalk is released.

High-pressure headlamp washing

(option on certain markets)

High-pressure headlamp washing consumes a large quantity of washer fluid. To save fluid, the headlamps are washed as follows.

Dipped beam selected with the switch on lighting panel:

The headlamps are washed the first time the windscreen is washed. Within the next ten minutes, they are washed every fifth wash of the windscreen. If more than ten minutes passes between washes, the headlamps are washed every time.

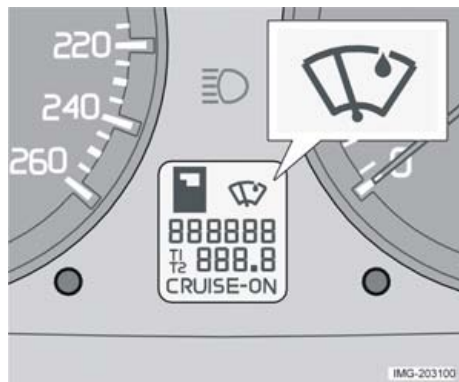
Parking/position lamps selected with the switch on the lighting panel:

- Bi-Xenon headlamps are only washed every fifth wash cycle irrespective of the time that elapses.
- Halogen headlamps are not washed.

The switch on the lighting panel is in position **0**:

- Bi-Xenon headlamps are only washed every fifth wash cycle irrespective of the time that elapses.
- Halogen headlamps are not washed.

Right-hand stalk switch



Rain sensor (option)

The rain sensor automatically activates the windscreen wipers based on how much water it detects on the windscreen. The sensitivity of the rain sensor can be adjusted using the thumbwheel (C).

Turn the thumbwheel clockwise to increase sensitivity or anticlockwise to decrease sensitivity, (there is an extra swipe when the thumbwheel is turned clockwise.)

On/Off

When activating the rain sensor, the ignition key must be in position **I** or **II** and the windscreen wiper stalk switch must be in position **0**.

To activate the rain sensor:

- Press the button (B). An LED in the button comes on to indicate that the rain sensor is active.

To turn the rain sensor off, either:

- Press button (B)
- Press the stalk switch downward to another wiper program. If the stalk switch is raised, the rain sensor will remain active, the wipers make an extra sweep and then return to rain sensor mode when the stalk is released to position **0**.

The rain sensor is automatically deactivated when the key is removed from the ignition switch or five minutes after the ignition is switched off.

Thumbwheel

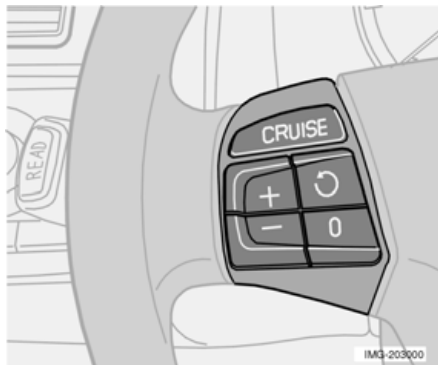
Use the thumbwheel to adjust the frequency of sweeps when intermittent wiping is selected, or the sensitivity to rain when the rain sensor is selected.

IMPORTANT!

At an automatic car wash:

Deactivate the rain sensor by pressing the button (B) while the ignition key is in position **I** or **II**. Otherwise, the windscreen wipers could start swiping and become damaged.

Cruise control (option)



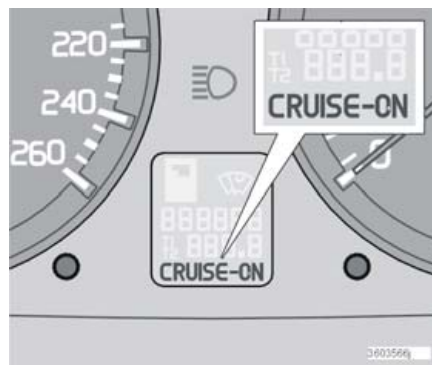
Activating

The controls for cruise control are to the left of the steering wheel.

Setting the desired speed:

- Press the CRUISE button. CRUISE is shown on the combined instrument panel.
- Touch + or - to lock the vehicle speed. CRUISE ON appears on the combined instrument panel.

Cruise control cannot be engaged at speeds below 30 km/h or above 200 km/h.



Increasing or decreasing speed

- Increase or decrease the locked speed by pressing and holding + or -. The speed of the car when the button is released is set as the new speed.

Pressing (less than half a second) + or - changes the speed 1 km/h or 1.6 km/h¹.

NOTE! A temporary increase in speed (less than one minute) using the accelerator, such as while overtaking, does not affect the cruise control setting. When you release the accelerator, the car will return to the programmed speed.

Temporary disengagement

- Press 0 to disengage the cruise control temporarily. CRUISE will be shown on the combined instrument panel. The speed set earlier is stored in the memory.

The cruise control is also temporarily disengaged when:

- the brake pedal or clutch pedal is depressed
- speed falls below 25-30 km/h when travelling uphill¹
- the gear selector is moved to position **N**
- wheel spin or wheel lock-up occurs
- a temporary increase in speed lasts longer than one minute.

Return to the set speed



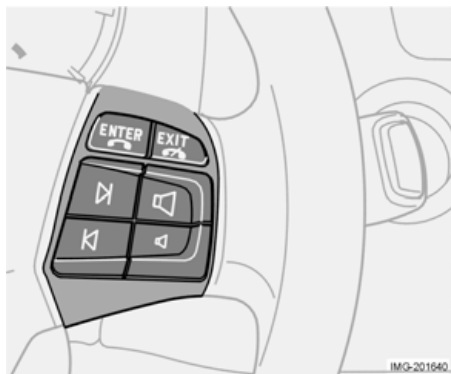
Press this button to resume the previously set speed. CRUISE-ON appears on the combined instrument panel.

Disengaging

Press CRUISE to disengage the cruise control. CRUISE-ON goes out on the combined instrument panel.

1. Depending on engine type.

Steering wheel keypad (option)



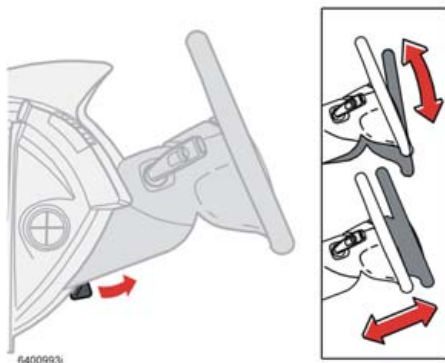
The four buttons at the bottom of the steering wheel keypad control the radio and the telephone. The function of a button depends on which system is active. The steering wheel keypad can be used to scroll between preset stations, change CD/MD tracks and adjust the volume.

Press and hold one of the arrow keys to fast forward/reverse or search for the next station.

The telephone must be in standby mode to adjust audio system settings.

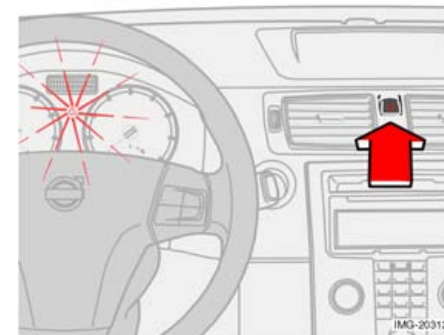
The telephone must be activated to control the telephone functions using the arrow keys.

Steering wheel adjustment, hazard warning flashers



WARNING!

Adjust the steering wheel before driving off, never while driving. Before driving, check that the steering wheel is fixed in position.



Steering wheel adjustment

The steering wheel can be adjusted for both height and reach.

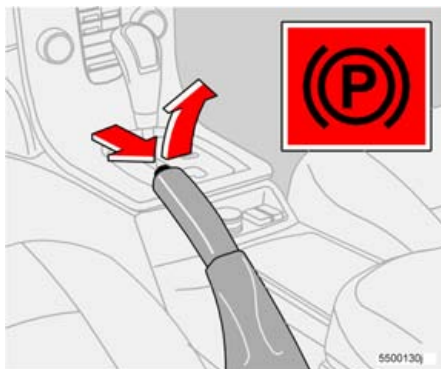
- Pull the lever towards you to release the steering wheel.
- Adjust the steering wheel to the position that suits you best.
- Push back the lever to fix the steering wheel in place. If the lever is stiff, press the steering wheel lightly at the same time as you push the lever back.

Hazard warning flashers

Use the hazard warning flashers (all direction indicators flash) when the car is stopped where it could be a traffic hazard or obstruction. Press the button to activate the function.

NOTE! Regulations regarding the use of hazard warning flashers vary from country to country.

Parking brake, electrical socket



Parking brake (handbrake)

The lever is located between the front seats. The parking brake operates on the rear wheels when it is applied. The warning symbol in the combined instrument panel comes on irrespective of how hard the parking brake is applied. For this reason, always pull the lever to the end position.

NOTE! The lamp comes on irrespective of how hard the parking brake is applied.

Apply the parking brake

- Press the foot brake down firmly.
- Pull the parking brake lever to the end position.

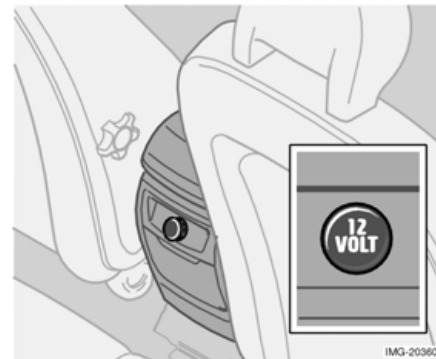
- Release the foot brake and make sure that the car is stationary.
- Move the gear selector into position:
1 for manual gearbox
P for automatic transmission.

Parking on a hill

- If the car is parked uphill; turn the wheels away from the kerb.
- If the car is parked downhill; turn the wheels toward the kerb.

Release the parking brake

- Press the foot brake down firmly.
- Pull the parking brake lever up slightly, press the button, release the parking brake lever and release the button.



Electrical socket in the rear seat

The electrical socket can be used for 12 V accessories, such as mobile phone chargers and coolers. The maximum current is 10 A. For the socket to supply current, the ignition key must be in at least position I.

WARNING!

Always leave the plug in the socket when the socket is not in use.

Cigarette lighter (option)

Activate the lighter by pushing in the button. The button pops out when the lighter is hot. Pull out the lighter and light a cigarette on the heated coils.

Power windows

Operation

The power windows are operated using the controls in the door armrests. The ignition key must be in position **I** or **II** for the power windows to operate. The windows continue to work when the car is stopped and ignition key removed, provided neither of the front doors is opened.

To open a window:

- Depress the front of the control.

To close a window:

- Raise the front of the control.

Remote control and central locking buttons

All side windows can be opened/closed automatically with the remote control or the central locking buttons:

- Press and hold the lock button for two seconds - the windows will open or close.

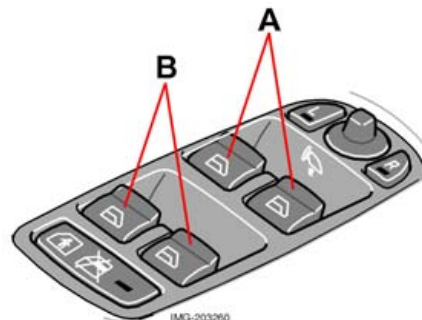
To interrupt opening/closing:

- Press the lock button again.



WARNING!

Make sure that children's or other passengers' hands are clear when closing the windows by remote control.



A. Front door windows

B. Rear door windows

Driver's door

The driver can operate all of the power windows from the driver's seat.

The windows in the front doors can be opened and closed in two ways:

Manual operation

- Depress one of the controls (A) or (B) gently or raise it gently. The power window opens or closes as long as the switch is actuated.

Automatic operation

- Fully depress one of the controls (A) or (B) or raise it fully, then release. The side window will then open or close automatically. If the window is obstructed by an object, the movement will stop.



WARNING!

If there are children in the car:
Remember to switch off the supply to the power windows by removing the ignition key if the driver leaves the car.
Make sure that children's and other passengers' hands are clear when closing the windows.



WARNING!

If the rear door windows are operated from the driver's door:
Check that none of the rear seat passengers are in danger of getting their hands caught when closing the windows.

Power windows



Blocking rear power windows and electric child safety locks¹.

Blocking power windows in the rear doors

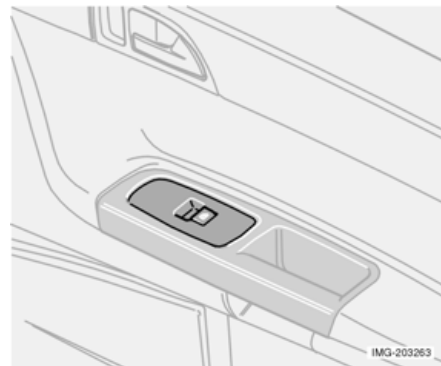
The switch LED is lit

The rear door windows can only be operated from the driver's door.

NOTE! If the car has electric child safety locks on the rear doors, the LED indicates that these are activated. The doors then cannot be opened from the inside. A text message is shown on the display when the electric child safety locks are activated.

The switch LED is unlit

The rear door windows can be operated both with the control on each rear door and with the controls on the driver's door.



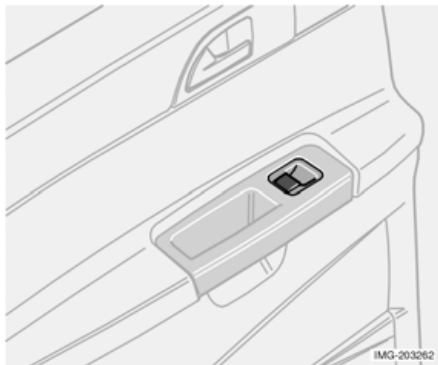
Front passenger seat.

Front passenger seat

The control in the front passenger door operates that window only.

1. Option.

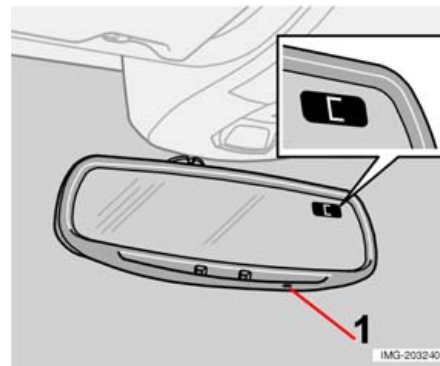
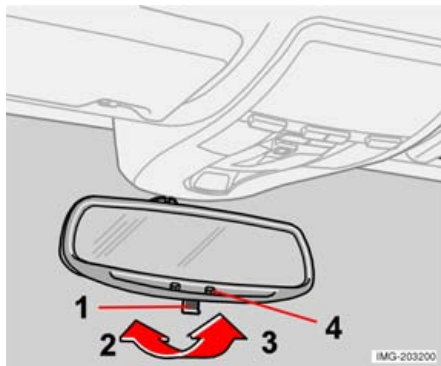
Power windows



Rear power windows

The rear door windows can be operated with the control on each door or with the switch on the driver's door. If the LED in the switch for blocking the rear power windows (located in the control panel in the driver's door) is lit, the rear door windows can only be operated from the driver's door. The windows in the rear doors are operated in the same way as the windows in the front doors.

Rearview and door mirrors



Interior rearview mirror

Dipping

1. Dip the mirror with the lever
2. Normal position
3. Dipped position. Use this to reduce annoying dazzle from the headlights of following vehicles.

Autodimming (option)

A sensor (4) on the bottom edge of the mirror detects light coming from behind and dims the mirror if the light is strong. An authorised Volvo workshop can adjust the sensitivity.

NOTE! The illustration is a montage. The mirror has either manual dipping or automatic dimming, never both at the same time.

Rearview mirror with compass (option on certain markets)

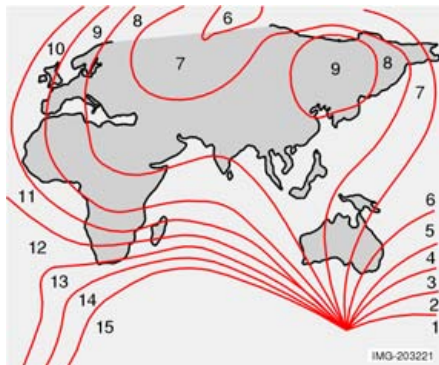
The upper right-hand corner of the rearview mirror has an integrated display that shows the compass direction in which the front of the car is pointing. Eight different directions are shown with English abbreviations: N (north), NE (north east), E (east), SE (south east), S (south), SW (south west), W (west) and NW (north west).

Calibrating the compass

The compass may need calibrating in special cases (setting points of the compass). The letter C is shown in the mirror's display if the compass needs calibrating.

- Stop the car in a large open area.
- Start the car.
- Press and hold button (1) (use the point of a pen or similar) for at least six seconds. The character C will reappear.
- Drive slowly in a circle at a speed of no more than 10 km/h until a compass direction appears on the display.
- Calibration is complete.

Rearview and door mirrors



Magnetic zones.

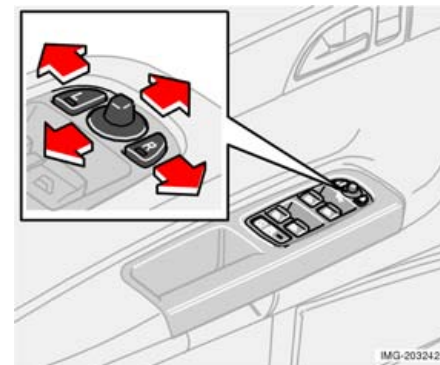
Adjusting the zone

The earth is divided into 15 magnetic zones. The compass is set for the geographical area to which the car was delivered.

Select a different compass area as follows:

- Turn on the ignition.
- Press and hold button (1) for at least three seconds (use the point of a pen or similar). The number for the current area is displayed.
- Press the button repeatedly until the number for the required geographic area (1-15) is shown.

- The display will revert to showing the compass direction a few seconds after you stop scrolling.



Door mirrors

The controls for adjusting the two door mirrors are at the front of the driver's door armrest.

- Press the **L** button for the left-hand door mirror or **R** for the right-hand door mirror. The LED in the button lights.
- Adjust the position with the joystick in the centre.
- Press the **L** or **R** button again. The LED should no longer be lit.

Rearview and door mirrors

Retractable power door mirrors (option)

The mirrors can be retracted for parking and driving in narrow spaces.

- Press the **L** and **R** button at the same time.
- Release them after approximately one second. The mirrors automatically stop in the fully retracted position.

IMPORTANT!

Do not use a scraper to remove ice from the mirrors as this can scratch the glass. Use the defroster function instead, see page 71/73.



WARNING!

The driver-side door mirror is wide angled to provide optimal vision. Objects may appear further away than they actually are.

Folding out the mirrors

- Press the **L** and **R** button at the same time. The mirrors automatically stop in the fully extended position.

Resetting to neutral

Mirrors that have been moved out of position by an external force must be reset to the neutral position for electric retracting and extending to work.

- Press the **L** and **R** button to retract the mirrors.
- Extend the mirrors again with the **L** and **R** button. The mirrors are now reset to the neutral.

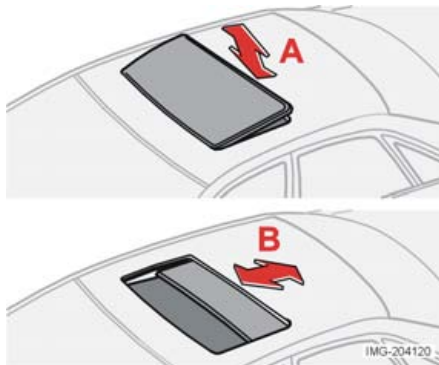
Storing door mirror positions

The positions of the mirrors are stored when the car is locked with the remote control. When the car is unlocked with the same remote control the mirrors and the driver's seat adopt the stored positions within five minutes.

Home safe and approach lighting

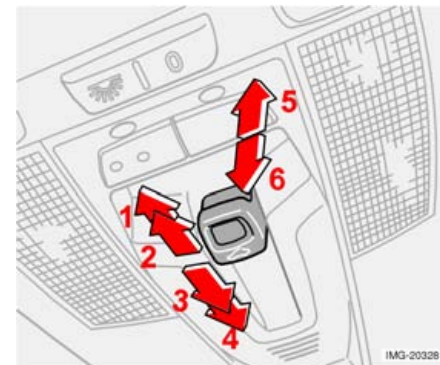
The lamps on the door mirrors light when the home safe lighting or approach lighting is activated.

Power sunroof (option)



WARNING!

If there are children in the car:
Switch off the supply to the power sunroof
by removing the ignition key if the driver
leaves the car.



Open positions

The sunroof controls are located in the roof panel. The sunroof can be opened to two positions:

Ventilation position, raised at the rear edge (A)

Sliding position, backward/forward (B)

The ignition key must be in position **I** or **II**.

1. Opening, automatic
2. Opening, manual
3. Closing, manual
4. Closing, automatic
5. Opening, ventilation position
6. Closing, ventilation position

Power sunroof (option)

Ventilation position

Open:

- Press the rear edge of the control (5) upward.

Close:

- Pull the rear edge of the control (6) downward.

From ventilation position to fully open sunroof:

- Pull the control rearward to the end position (1) and release.

Sliding position

Automatic operation

Pull the control past the point of resistance (2) to the rear end position (1) or past the point of resistance (3) to the forward end position (4) and release. The sunroof opens/closes completely.

Manual operation

Open:

- Pull the control rearward to the point of resistance (2). The sunroof moves toward the fully open position as long as the button is held in this position.

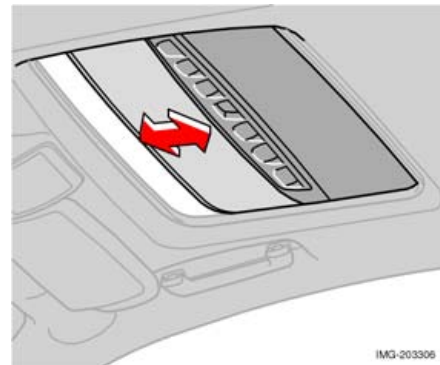
Close:

- Press the control forward to the point of resistance (3). The sunroof moves toward the closed position as long as the button is held in this position.



WARNING!

The sunroof's pinch-protection function only operates during automatic closing, not manual closing.



IMG-203306

Closing using the remote control or central locking button

Closing using the remote control or central locking button:

- Press and hold the lock button for two seconds. The sunroof and windows close and the doors lock.

If you need to interrupt closing:

- Press the lock button again.

Power sunroof (option)

WARNING!

Make sure that the hands of children and passengers are clear when closing the sunroof by remote control.

Sunscreen

The sunroof features a manual, sliding interior sunscreen. The sunscreen slides back automatically when the sunroof is opened. Grip the handle and slide the screen forwards to close it.

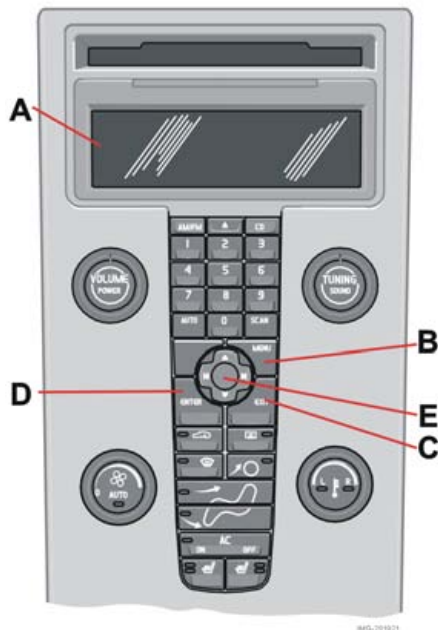
Pinch protection

The sunroof's pinch protection function is activated if the hatch is blocked by an object. If blocked, the sunroof will stop and automatically open to the previous position.

WARNING!

The sunroof's pinch protection function only operates during automatic closing, not during manual closing.
Make sure children's hands are clear when closing the sunroof.

Personal preferences



Control panel.

Possible settings

Personal preferences can be set for some of the car's functions: the locks, climate control

and audio functions. For audio functions, see page 187.

Control panel

- A. Display
- B. MENU
- C. EXIT
- D. ENTER
- E. Navigation

Use

The settings are shown on the display (A).

Open the menu to enter settings:

- Press MENU (B).
- Scroll, for example, to "Car Settings" with the navigation button (E).
- Press ENTER (D).
- Select an alternative with the navigation button (E).
- Press ENTER (D) to activate the selection.

Close the menu:

- Press EXIT (C) for approximately one second.

Climate control settings

Automatic fan adjustment

The fan speed can be set to AUTO mode in cars equipped with ECC:

- Select between Low, Normal and High.

Recirculation timer

When the timer is active, the air recirculates for 3-12 minutes, depending on the outside air temperature.

- Select On/Off depending on whether you wish the recirculation timer to be active.

Reset all

Resets the climate function options to the factory settings.

Car settings

Unlock feedback light

The hazard warning flashers can provide feedback when the car is unlocked with the remote control. This function can be turned On or Off.

Lock feedback light

The hazard warning flashers can provide feedback when the car is locked with the remote control. This function can be turned On or Off.

Autolock, doors

The doors and boot lid can be locked automatically when the car starts to move. The setting options are On or Off.

Unlock doors

There are two alternatives for unlocking:

- All doors – one press of the remote control unlocks all doors.

Personal preferences

- Driver's door first, then all others – one press of the remote control unlocks the driver's door. A second press then unlocks all the other doors.

Keyless entry

- All doors – all doors are locked or unlocked at the same time.
- Doors on the same side – front and rear doors on the same side are unlocked together.
- Both front doors – both front doors are unlocked simultaneously.
- One front door – one of the front doors (either) can be unlocked separately.

Approach lighting

Select the time the car's lights should remain on when the approach lighting button is pressed. The following alternatives are available: 30/60/90 seconds.

Home safe lighting

Select the time the car's lights should remain on when the left-hand stalk switch is pulled back after the ignition key has been removed. The following alternatives are available: 30/60/90 seconds.

Information

- VIN (Vehicle Identification Number). The car's unique identity number.
- Number of keys. The number of keys registered for the car is shown.

Climate control

General information on climate control	68
Manual climate control, AC	70
Electronic climate control, ECC (option)	72
Air distribution	75
Fuel-driven heater (option)	76

General information on climate control

Air conditioning

The climate control system cools or heats, and dehumidifies the air entering the passenger compartment. The car is equipped with either manual (AC) or electronic climate control (ECC).

NOTE! The air conditioning system can be switched off, but to ensure the best possible air in the passenger compartment and prevent the windows from misting, it should always be on.

Misting windows

Reduce the problem of windows misting up on the inside by cleaning the windows. Use a regular window cleaner.

Ice and snow

Remove ice and snow from the climate control air intake (the grille between the bonnet and the windscreen).

Fault tracing and repair

Entrust fault tracing and repair of the climate control system to an authorised Volvo workshop only.

Refrigerant

The air conditioning system contains R134a refrigerant. This refrigerant contains no chlorine, which means that it is harmless to the ozone layer. The system must only be

charged with R134a refrigerant. Have an authorised Volvo workshop carry out this work.

Passenger compartment filter

All air which enters the passenger compartment is first cleaned by a filter. This filter must be replaced regularly. Follow the Volvo Service Programme for the recommended replacement intervals. If the car is used in a severely contaminated environment, it may be necessary to replace the filter more often.

NOTE! There are several different types of passenger compartment filter. Ensure that the correct filter is installed.

Display

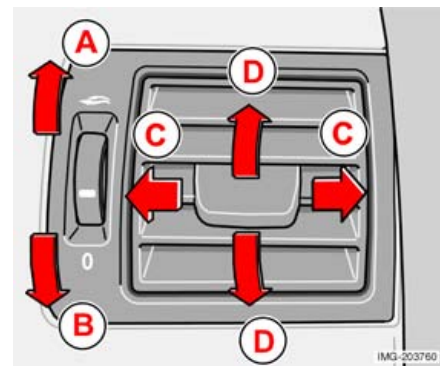
There is a display above the climate control panel that displays climate control settings.

Personal preferences

You can set preferences for two climate control functions:

- Fan speed in AUTO mode (applies only to cars with ECC).
- Recirculation timer for passenger compartment air.

For information about these settings, see page 64.



Air vents in the dashboard

- A. Open
- B. Closed
- C. Lateral airflow
- D. Vertical airflow

Aim the outer vents towards the side windows to remove misting from the front side windows.

Cold weather: Close the centre vents for optimum comfort and best demisting.

General information on climate control

ECC (option)

Actual temperature

The temperature you select corresponds to the physical experience with reference to factors such as air speed, humidity and solar radiation in and around the car.

Sensor location:

- The sun sensor is on the top side of the dashboard.
- The temperature sensor for the passenger compartment is behind the climate control panel.

NOTE! Do not cover or block the sensors with clothing or other objects.

Side windows and sunroof

To ensure that the air conditioning works satisfactorily, close all side windows and the sunroof (if fitted).

Acceleration

The air conditioning system switches off temporarily at full throttle. You may feel a temporary rise in temperature.

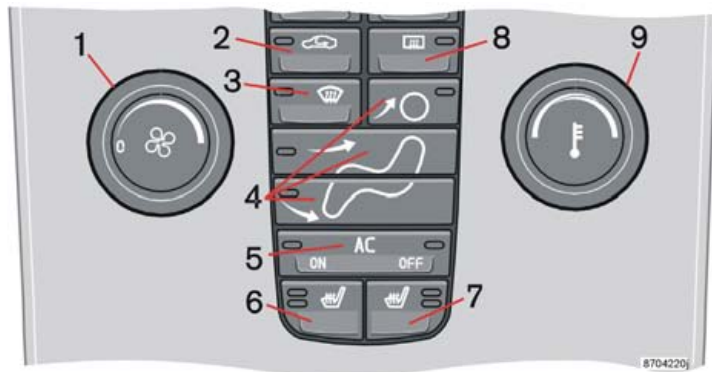
Vents in parcel shelf

NOTE! Do not cover the cargo area vents in the parcel shelf with clothing or other objects.

Condensation

In warm weather, condensation from the air conditioning system may drip under the car. This is normal.

Manual climate control, AC



Control panel.

1. Fan
2. Recirculation
3. Defroster
4. Air distribution
5. AC - ON/OFF
6. Heated front left seat
7. Heated front right seat
8. Rear window and door mirror defrosters
9. Temperature

Functions

1. Fan



Increase or decrease the fan speed by turning the knob. If the knob is turned anticlockwise and the fan indicator in the display goes out, the fan and the air conditioning are switched off. The display shows the fan symbol and OFF.

2. Recirculation



Recirculation can be used to shut out bad air, exhaust fumes, etc. from the passenger compartment. The air in the passenger compartment is recirculated. No outside air is taken into the car when this function is activated. Recirculation (together with the air conditioning system) cools the passenger compartment more quickly in hot weather. If the air in the car recirculates for too long then there is a risk of the windows misting.

Manual climate control, AC

Timer

The timer function minimises the risk of icing, misting and bad air if recirculation is selected. See the Personal preferences section, page 64 for how to activate and deactivate the function. Recirculation is always disengaged when you select Defroster (3).

3. Defroster



Quickly removes misting and ice from the windscreen and side windows. Air flows to the windows at high fan speed. The LED in the defroster button lights when

the function is active.

When the function is selected the following also takes place to provide maximum dehumidification of the air in the passenger compartment:

- the air conditioning (AC) is automatically engaged
- recirculation is automatically disengaged.

When the defroster is switched off the climate control returns to the previous settings.

4. Air distribution



The airflow can be distributed to the windows, dashboard vents or floor by pressing the air distribution buttons.

A symbol on the display above the climate control panel and a lit LED in the button indicate which function has been selected.

See the table on page 75.

5. AC - ON/OFF



ON: Air conditioning is engaged.

OFF: Air conditioning is disengaged. If Defroster (3) is activated the air conditioning is always engaged.

6. and 7. Heated front seats

(option on certain markets)



- Higher heat level
Press the button once – both LEDs light.
- Lower heat level
Press the button twice – one LED lights.

- Heat off
Press the button three times – LEDs not lit.

8. Rear window and door mirror defrosters



Heating is used to quickly remove misting and ice from the rear window and door mirrors.

The rear window and door mirrors are defrosted simultaneously if the switch is pressed once. The function is active if one LED is lit in the switch. The door mirror heating is deactivated automatically after approximately 6 minutes. The rear window heating is deactivated after approximately 12 minutes.

9. Temperature



Select cooling or heating for both driver and passenger side.

Electronic climate control, ECC (option)



Control panel

1. Auto
2. Fan
3. Recirculation/Air quality system
4. Defroster
5. Air distribution
6. AC - ON/OFF
7. Heated front left seat
8. Heated front right seat
9. Rear window and door mirror defrosters
10. Temperature selector

Functions

1. Auto



The AUTO function automatically regulates climate control and maintains the desired temperature. The AUTO function controls heating, air conditioning, fan speed, recirculation, and air distribution. If you select one or more manual functions, the other functions continue to be controlled automatically. All manual settings are switched off when AUTO is switched on. The display shows AUTO CLIMATE.

2. Fan



Increase or decrease fan speed by turning the knob. The fan speed is regulated automatically if AUTO is selected and the previously set fan speed is disengaged.

NOTE! If the knob is turned anticlockwise and the fan indication on the display goes out, the fan and the air conditioning are switched off. The display shows the fan symbol and OFF.

Electronic climate control, ECC (option)

3. Recirculation



Recirculation can be used to shut out bad air, exhaust fumes, etc. from the passenger compartment. The air in the passenger compartment is recirculated.

No outside air is taken into the car when this function is activated. If the air in the car recirculates for too long, there is a risk of misting on the insides of the windows.

Timer

The timer function minimises the risk of icing, misting and bad air if recirculation is selected. See page 64, for how to activate and deactivate the function.

NOTE! When Defroster (4) is selected, recirculation is always deactivated.

3. Air quality system (option)



(same button as recirculation)

The air quality system consists of a multi-filter and a sensor. The filter separates gases and

particles to reduce the levels of odours and pollution in the passenger compartment. When the sensor detects polluted outside air, the air intakes are closed and the air in the passenger compartment is recirculated.

A green LED (A) lights in the button when the air quality sensor is active.

Activating the air quality sensor

- Press the AUTO button (1) to activate the air quality sensor (normal setting).

Or:

Switch between three functions by pressing repeatedly the recirculation button.

- Air quality sensor engaged – LED (A) lights.
- No recirculation engaged, provided it is not required for cooling in hot weather – LED not lit.
- Recirculation engaged – LED (M) lights.

Keep in mind the following:

- As a rule, the air quality sensor should always be engaged.
- Recirculation is limited in cold weather to avoid misting.
- If the insides of the windows start misting up, disengage the air quality sensor.
- The defroster function for the front, side and rear windows can also be used to demist the windows.

4. Defroster



Quickly removes misting and ice from the windscreen and side windows. Air flows to the windows at high fan speed. The LED in the defroster button lights when

the function is active.

When the function is selected the following also takes place to provide maximum dehumidification of the air in the passenger compartment:

- the air conditioning (AC) is automatically engaged
- recirculation is automatically disengaged.

When the defroster is switched off the climate control returns to the previous settings.

5. Air distribution



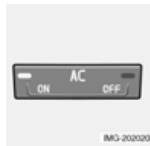
The airflow can be distributed to the windows, dashboard vents or floor by pressing the air distribution buttons.

A symbol on the display above the climate control panel and a lit LED in the button indicate which function has been selected.

See the table on page 75.

Electronic climate control, ECC (option)

6. AC - ON/OFF



The air conditioning system is controlled automatically by the system when the ON LED is lit. This way, incoming air is sufficiently cooled and dehumidified.

When the OFF LED lights, the air conditioning system is always disengaged. Other functions are still controlled automatically. When Defroster (4) is selected, the air conditioning system is set for maximum dehumidification.

7. and 8. Heated front seats

(option on certain markets)



To activate front seat heating:

- Higher heat level
Press the button once - both LEDs light.
- Lower heat level
Press the button twice - one LED lights.
- Heat off
Press the button three times - LEDs not lit.

9. Rear window and door mirror defrosters



Heating is used to quickly remove misting and ice from the rear window and door mirrors.

The rear window and door mirrors are defrosted simultaneously if the switch is pressed once. The function is active if one LED is lit in the switch. The door mirror heating is deactivated automatically after approximately 6 minutes. The rear window heating is deactivated after approximately 12 minutes.

10. Temperature selector



The temperatures on the driver and passenger sides can be set independently.





Press the button once to activate one side. Press again to activate the other side. Press the button a third time to activate both sides.





The active side is indicated by an LED in the button and on the display above the climate control panel.

When the car is started, the most recent setting is resumed.

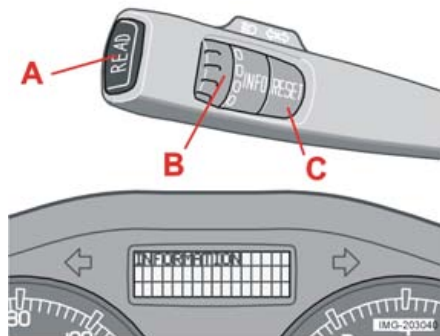
NOTE! Heating or cooling cannot be hastened by selecting a higher or lower temperature than the actual desired temperature.

Air distribution

	Air distribution	Use:
 IMG-202004	Air to windows. Some air flows to the dashboard air vents. The air is not recirculated. Air conditioning is always engaged.	To remove ice and misting quickly.
 IMG-2020042	Air to windscreen and side windows. Some air flows to the dashboard air vents.	To prevent misting and icing in a cold and humid climate. (Not for low fan speed.)
 IMG-202004	Airflow to windows and from dashboard air vents.	To ensure good comfort in warm, dry weather.
 IMG-2020041	Airflow to the head and chest from the dashboard air vents.	To ensure efficient cooling in warm weather.

	Air distribution	Use:
 IMG-2020089	Air to the floor and windows. Some air flows to the dashboard air vents.	To ensure comfortable conditions and good demisting in cold or humid weather.
 IMG-2020087	Air to floor and from dashboard air vents.	In sunny weather with cool outside temperatures.
 IMG-2020042	Air to the floor. Some air flows to the dashboard air vents and windows.	To warm the feet.
 87042117	Airflow to windows, from dashboard air vents and to the floor.	To provide cooler air for the feet or warmer air to the upper body in cold weather or hot, dry weather.

Fuel-driven heater (option)



WARNING!

The car must be outdoors when the petrol or diesel heater is used.

WARNING!

Switch off the fuel-driven heater before refuelling. Spilled fuel could be ignited by the exhaust gases.

Check the information display to see that the heater is off. (When the parking heater is running, PARK HEAT ON is shown on the information display.)



Warning decal on fuel filler flap.

General information about heaters

The parking heater can be started immediately or set with two different start times using TIMER 1 and TIMER 2. Here, start time refers to the time the car is heated and ready. The car's electronic system calculates when heating should be started based on the outside temperature. The heater is not run if the outdoor temperature exceeds 25 °C. At temperatures of -10 °C and below, the maximum running time of the parking heater is 60 minutes.

Fuel-driven heater (option)

Activating the heater

- Enter the time when the car is to be used. Press RESET (C) to enter the hours and minutes.
- Press and hold the RESET button until the timer is activated.

Parking on a hill

If the car is parked on a steep hill, the front of the car should point downhill to ensure that there is a supply of fuel to the parking heater.

Direct start

- Use the thumbwheel (B) to scroll to DIRECT START.
- Press RESET (C) to access the options ON and OFF.
- Select ON.
The heater will now run for 60 minutes. Heating of the passenger compartment will begin as soon as the engine coolant has reached a temperature of 30 °C.

Immediate stop of heater

- Use the thumbwheel (B) to scroll to DIRECT START.
- Press RESET (C) to access the options ON and OFF.
- Select OFF.

NOTE! The car can be started and driven while the parking heater is still running.

Battery and fuel

If the battery has insufficient charge or the fuel level is too low, the parking heater will be switched off automatically. A message appears on the information display. Acknowledge the message by pressing the READ button (A).

IMPORTANT!

Repeated use of the parking heater combined with short journeys may discharge the battery and impair starting. If the heater is used regularly, the car must be driven for the same as the heater is run to ensure that the alternator has time to charge the battery.

Setting TIMER 1 and 2

For safety reasons, you can only programme times for the following 24 hours, not several days in advance.

- Scroll with the thumbwheel to TIMER.
- Touch RESET to move to the flashing hours setting.
- Scroll with the thumbwheel to the desired hour.
- Touch RESET to move to the flashing minutes setting.

- Scroll with the thumbwheel to the desired minute.
- Touch RESET to confirm the setting.
- Press RESET to activate the timer. After setting TIMER 1, a second start time can be programmed with TIMER 2. Access this with the thumbwheel. Set the alternative start time in the same way as TIMER 1.

Messages on the display

When TIMER 1, TIMER 2 and DIRECT START settings are activated, the information symbol on the combined instrument panel lights and an explanatory text appears on the information display. The display also indicates which timer is active when the driver removes the key from the ignition to leave the car.

Clock/timer

If the car clock is reset after the heater timers are programmed, the selected times will be cancelled.

Fuel-driven heater (option)

Additional heater (diesel)

(certain countries)

Extra heat from the additional heater may be required in cold weather to reach the correct temperature in the passenger compartment.

The additional heater starts automatically when extra heat is required if the engine is running. It is switched off automatically when the correct temperature is reached or when the engine is switched off.

Interior

Front seats	80
Interior lighting	82
Storage spaces in the passenger compartment	84
Rear seat	86
Cargo area	88

Front seats



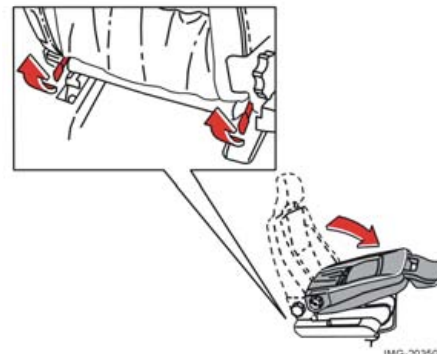
IMG-203502

5. Backrest rake, turn the wheel
6. Control panel for power seat (option).



WARNING!

Adjust the position of the driver's seat before setting off, never while driving. Check that the seat is locked in position.



IMG-203501

Seating position

The driver's and passenger seats can be adjusted to the optimum sitting and driving positions

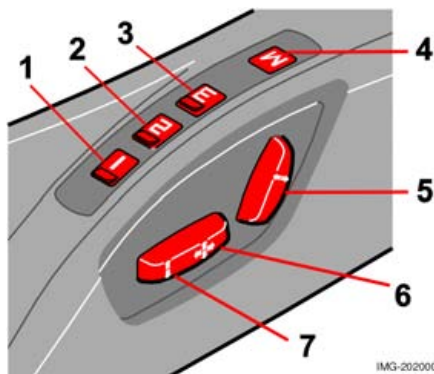
1. Forward/backward: lift the handle to adjust the distance to the steering wheel and pedals. Check that the seat is locked after changing position
2. Raise/lower the front of the seat cushion, pump up/down (option on passenger side)
3. Raise/lower the seat, pump up/down (option on passenger side)
4. Lumbar support (option, passenger side), turn the wheel

Lowering the front seat backrest (option)

The passenger seat backrest can be folded forward to make room for long loads.

- Move the seat as far back as possible.
- Adjust the backrest to an upright position 90 degrees.
- Lift the catches on the rear of the backrest while folding it forwards.

Front seats



Power seat (option)

Seat with memory function (option)

1. Seat adjustment, memory 1
2. Seat adjustment, memory 2
3. Seat adjustment, memory 3
4. Storing preset positions

Preparations

The seat is normally adjusted when the ignition key is in position **I** or **II**. It can also be adjusted within 10 minutes of the door being unlocked with the key or remote control. If the door is closed and the ignition key is not yet in the ignition, or is in the **0** position, adjustments can be made within 40 seconds of the door being closed.

The remote control used to unlock the car stores information in the seat's memory about the changes made to the seat settings. When the car is next unlocked with the same remote control and the door is opened within 2 minutes, the driver's seat and the door mirrors assume the stored positions.

Three positions can be stored. After adjusting the seat, press and hold button M (4) and then press button (1). Further seat settings can be stored in the memory using memory buttons (2) and (3).

Setting preset positions

Press and hold one of the memory buttons (1), (2) or (3) until the seat stops. If you release the button, the seat stops immediately for safety reasons.

Seat adjustment

The following can be set with switches (5), (6) and (7):

5. Backrest rake
6. Seat forward/backward and up/down
7. Front edge of seat cushion up/down

Only one of the electric motors can be operated at a time. The power front seats have overload protection which is tripped if a seat is blocked by an object. If this happens, turn off the ignition (position **0**) and wait

about 20 seconds before adjusting the seat again.

Emergency stop

If the seat accidentally begins to move, press one of the buttons to stop the seat.



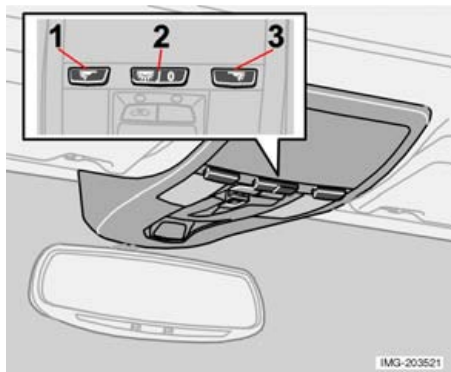
WARNING!

Ensure that there is nothing in front of, behind, or under the seat during adjustment.

Ensure that none of the backseat passengers will be trapped.

To avoid injury, ensure that children do not play with the switches.

Interior lighting



door is closed. The dimmer function is active.

- On – left-hand side depressed, passenger compartment lighting on



Front seat lighting

1. Lighting for left-hand side
2. Switch
3. Lighting for right-hand side

The lighting in the front part of the passenger compartment is controlled with buttons 1 and 3 in the roof console.

Switch (2) has three positions for all passenger compartment lighting:

- Off – right-hand side depressed, automatic lighting off.
- Neutral position – passenger compartment lighting comes on when a door is opened and goes out when the

Rear seat lighting

The lamps are turned on or off by pressing the respective button. The lamps can be activated within 30 minutes of the engine being switched off or one of the doors being opened or closed.

Interior lighting

Automatic lighting

Passenger compartment lighting switches on and off automatically when the switch (2) is in the neutral position. See illustration.

The lighting comes on and remains on for 30 seconds if:

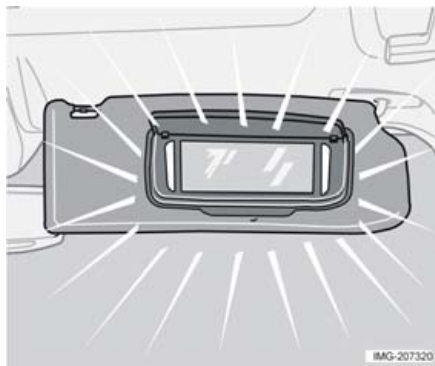
- the car is unlocked from the outside with the key or remote control
- the engine is stopped and the ignition key is turned to position **0**

The lighting switches off when:

- the engine is started
- the car is locked from the outside with the key or remote control

The lighting comes on and remains lit for 5 minutes if one of the doors is open.

The passenger compartment lighting can be switched on or off within 30 minutes from the time that the ignition key is turned to position **0** with button 2. The lighting then remains switched on for 5 minutes if not switched off. These times are programmed and can be adjusted, see page 65.

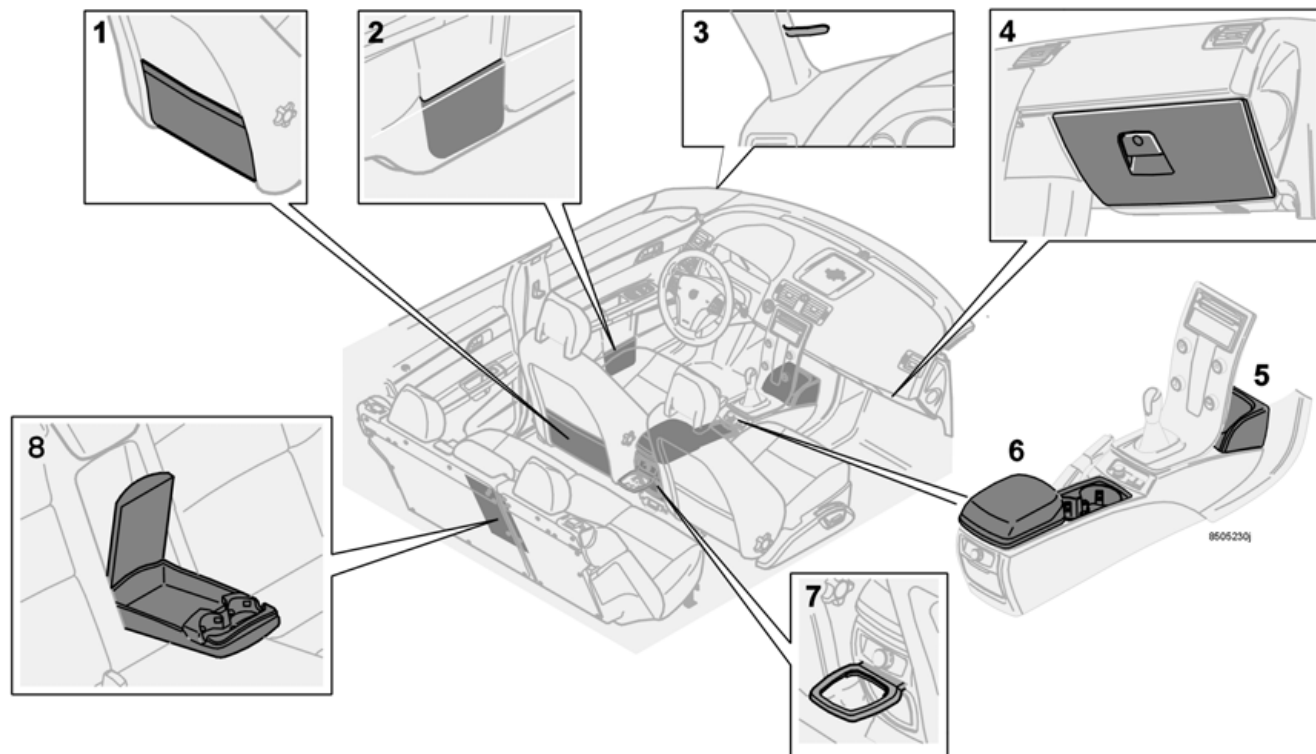


Vanity mirror¹

The light comes on automatically when the cover is lifted.

1. Option on certain markets.

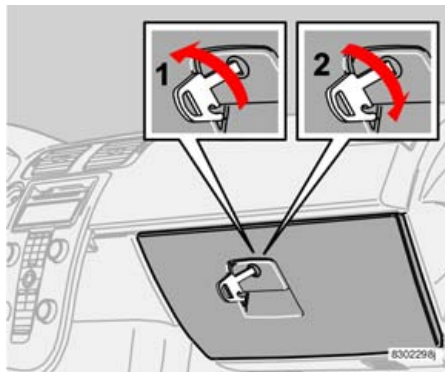
Storage spaces in the passenger compartment



Storage spaces in the passenger compartment

Storage spaces

1. Storage pocket (also on the front edge of the front seat cushions).
2. Compartment in door panel.
3. Ticket clip.
4. Glovebox.
5. Waste bin (accessory).
6. Storage compartment (e.g. for CD discs) and cup holder¹.
7. Bottle holder (option).
8. Storage compartment and cup holder.



IMPORTANT!

The waste bin (5) must not be mounted if a phone handset is mounted on the right-hand side of the centre console.



WARNING!

Ensure that no hard, sharp or heavy objects lie or protrude in such a way that they could cause injury during heavy braking.

Always secure large and heavy objects with a seatbelt or cargo retaining straps.

Glovebox

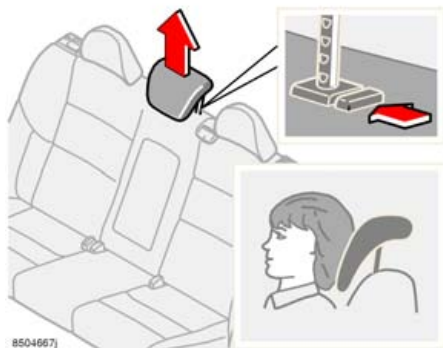
The Owner's Manual and maps can be kept here. There are also holders for coins, pens and fuel cards. The glovebox can be locked with the detachable key blade in the remote control. For further information on the key blade, see page 92.

Floor mats (option)

Volvo supplies floor mats specially manufactured for your car. These should be properly anchored with the clips on the floor so they do not slide and get jammed beside or under the driver's pedals.

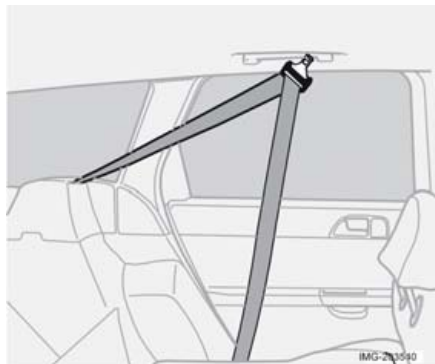
1. Storage compartment, in certain markets.

Rear seat



Centre rear head restraint

All head restraints can be adjusted vertically to suit the height of the passenger. The upper edge of the head restraint should be aligned with middle of the back of the head. Raise the head restraint as necessary. To lower the head restraint, press the button by the right-hand pillar at the same time as pushing down the head restraint. To remove the head restraint, press the button by the right-hand pillar while lifting the head restraint.



IMPORTANT!

The head restraints can be damaged if they are not removed for loading. The centre head restraint must also be removed for heavy loads.

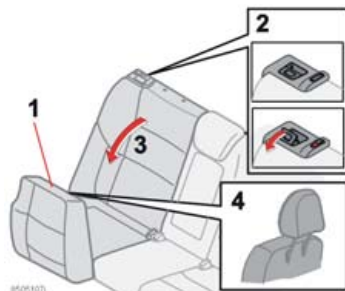
Tipping the rear seat backrest

The rear seat backrests can be tipped forwards together, or individually, to make it easier to transport long objects. To avoid damaging the seatbelts when folding the backrests up or down, these should be hooked onto the grab handles.

NOTE! When tipping the rear seat the safety plug for the 12 V socket should be removed and placed in the glovebox to avoid pressure marks in the upholstery.

- Hang the seatbelts on the hooks before lowering or raising the backrests.
- Lift the rear edge of the seat cushion (1) to fold the seat cushions forward.

Rear seat



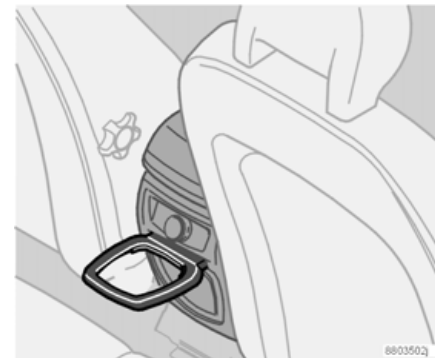
WARNING!

Remember to take down the seatbelts once you have raised the backrest.

Lowering the backrest

- Pull the lock catch (2) up and forward to release the backrest. A red indicator on the lock catch shows that the backrest is no longer locked in place.
- Fold the backrests (3) forward halfway and remove the head restraints on the outside seats. The centre seat's head restraint must be removed for a fully level floor.
- Place the head restraints in the plastic sleeves on the undersides (4) of the raised seat cushions.

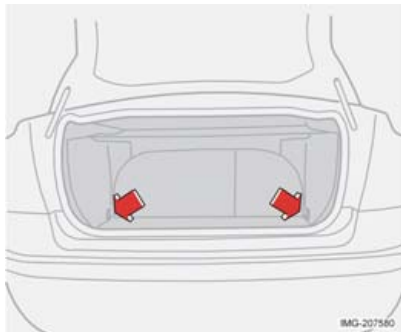
NOTE! When the backrest has been raised, the red indicator should no longer be showing. If it is, the backrest is not locked in place.



Bottle holder (option)

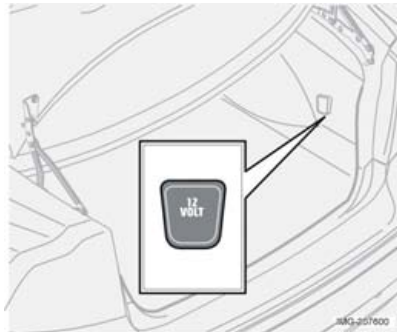
A bottle holder for larger bottles is located on the rear of the tunnel console.

Cargo area



Load retaining eyelets

The load retaining eyelets are used to fasten straps or nets to anchor items in the cargo area.



Electrical socket in cargo area (option)

Fold down the cover to access the electrical socket. This socket works regardless of whether the ignition is on. If the ignition is switched off and an appliance requiring a current greater than 0.1 A is plugged into the electrical socket, a warning message appears on the information display. Avoid using the electrical socket with the ignition switched off due to the risk of running the battery flat.



Bag holder (option)

The bag holder holds shopping bags in place and prevents them tipping over and spilling their contents.

- Open the hatch in the cargo area.
- Secure the shopping bags with the strap.

Locks and alarm

Remote control with key blade	90
Keyless drive (option)	94
Locking and unlocking	96
Child safety locks	98
Alarm (option)	99

Remote control with key blade

Remote control

The car is supplied with two remote controls which also serve as ignition keys. The remote controls contain detachable metal key blades for mechanical locking/unlocking of the driver's door and glovebox.

The key blades' unique code is available at authorised Volvo workshops, which can produce new key blades.

A maximum of six remote controls/key blades can be programmed and used for one single car.

Turn signal indication during locking/unlocking

When the car is locked or unlocked using the Keyless drive system or the remote control, two flashes of the direction indicators serve to indicate that locking/unlocking was correctly performed. When locking, indication is only given if all locks are activated once the doors have been closed.

Personal preferences can be used to deactivate indication via the direction indicators. There will then be no visual indication as to whether the lock status is correct. See page 64.

Loss of a remote control

If you lose a remote control, take the car and the other remote control to an authorised

Volvo workshop. The code of the missing remote control must be erased as a theft prevention measure.

Immobiliser

The remote controls are fitted with coded chips. The code must be accepted by the reader (receiver) in the ignition switch. The car can only be started if the correct remote control with the correct code is used.



Remote control functions

1. Locking – Locks the doors and the tailgate. Press and hold to close the windows and sunroof.
2. Unlocking – Unlocks the doors and boot lid. Press and hold to open the windows.
3. Approach lighting – When you approach the car:
Press the yellow button on the remote control to switch on the interior lighting, position/parking lamps, number plate lighting and door mirror lamps (option). The lighting is switched off automatically after 30, 60 or 90 seconds.

Remote control with key blade

For information on setting the desired delay time, see page 65.

4. Boot lid – Press the button once to unlock the boot lid only.

NOTE! The function does not open the boot lid.

5. Panic function – Used to attract attention in an emergency. Press and hold the red button for at least three seconds or press it twice within three seconds to activate the direction indicators and the horn. The function can be turned off with the same button once it has been active for at least five seconds. The function switches off automatically after 30 seconds.

IMPORTANT!

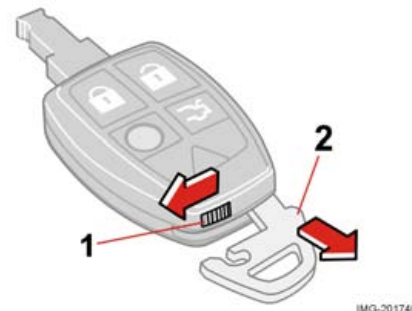
The narrow section of the remote control is particularly sensitive - this contains the chip. The car cannot be started if the chip is damaged.

Key blade

This feature is intended for when leaving the car, such as for servicing or valet parking at a hotel. Hand over the remote control and keep the removable key blade.

Use the remote control's detachable key blade to block access to the glovebox and cargo area¹. This means that the remote control can only open the doors and that the car can be driven.

NOTE! The driver's door can also be unlocked using the remote control's detachable key blade (without activating central locking), but this triggers the alarm which must then be deactivated using the remote control. See page 99.



Removing the key blade

To take the key blade out of the remote control:

- Slide the spring-loaded catch (1) to the side while pulling the key blade (2) out.

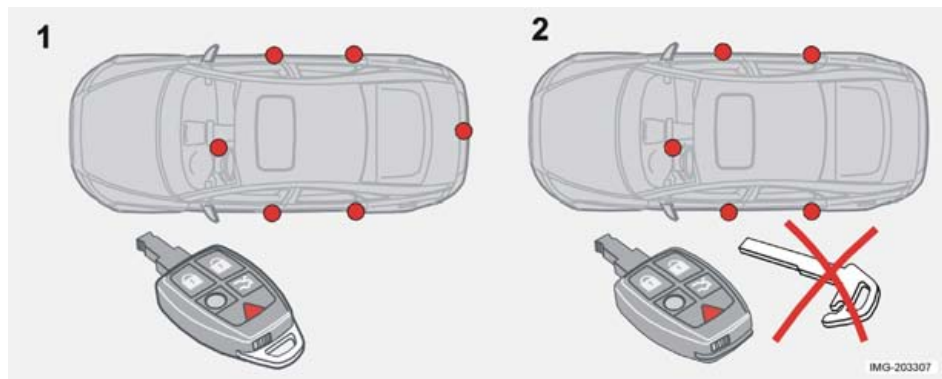
Inserting the key blade

Be careful when inserting the key blade into the remote control.

- Hold the remote control with the narrow end pointing down and lower the key blade into its slot.
- Lightly press the key blade to lock it in position. You should hear a "click".

1. Only certain markets

Remote control with key blade



1. Active locks for remote control, without service locking activated.
2. Active locks for remote control, with service locking activated.

Service locking¹

Locking the glovebox: turn the key blade 90 degrees clockwise.

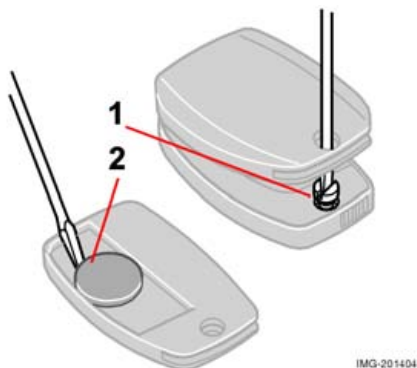
Service locking: turn the key blade 180 degrees clockwise. This also means that the boot lid is blocked against opening with the remote control (a message is shown in the information display).

Weak remote control battery

When the battery runs down and full functionality cannot be guaranteed, the information symbol and REMOTE BATTERY LOW VOLTAGE appear on the display.

1. Certain markets

Remote control with key blade



- Prise out (2) and change the battery.
Avoid touching the battery and its terminals with your fingers.

- Refit the cover and screw it shut.
- Press the key blade back into place.

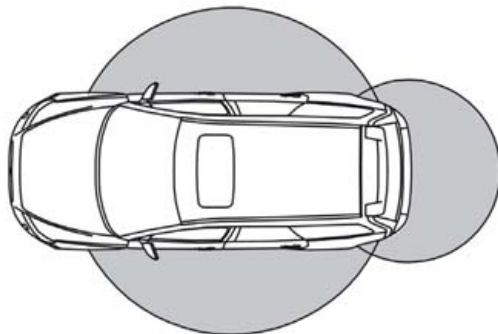
Dispose of the old battery in an environmentally-friendly way.

Replacing the remote control battery

If the locks repeatedly fail to respond to signals from the remote control at a normal distance, the battery should be replaced (type CR 2032, 3 V).

- Pull out the key blade.
- Place the remote control with the keypad downward and remove the screw (1) using a small screwdriver.
- Remove the cover.
- Carefully note the position of the battery's + and – poles on the inside of the cover.

Keyless drive (option)



8302435j

Keyless lock and ignition system

The keyless drive system allows the car to be unlocked, driven and locked without the need for a key. You simply have to have the remote control with you in a pocket or bag.

The system makes it easier and more convenient to open the car, for example with shopping bags in one hand and a child in the other. It saves you having to take out or look for the remote control.

The two remote controls incorporate the keyless drive feature. You can order additional remote controls. The keyless drive system can handle up to six remote controls.

Remote control max. 1.5 m from the car

In order to open a door or the boot lid, a remote control must be no more than approx. 1.5 m from the car door handle or boot lid.

This means that the person who wishes to lock or unlock a door must have the remote control with him or her. It is not possible to lock or unlock a door if the remote control is on the other side of the car.

The grey areas in the illustration depict the areas covered by the system's antennas.

If someone leaves the car and takes a keyless drive remote control with them, a warning message appears on the information display and a reminder signal sounds. The warning message disappears when the remote

control is brought back to the car or the ignition dial is turned to position **0**. The warning is only issued if the ignition dial is in position **I** or **II** after a door has been opened and closed.

The warning message and reminder signal disappear when the remote control is brought back to the car after one of the following actions:

- a door has been opened and closed
- the ignition dial has been turned to position **0**
- the READ button has been pressed.

Keyless drive (option)

Never leave any remote control in the car

If a remote control with keyless drive function is left in the car, it is made passive when the car is locked. This prevents unauthorised entry.

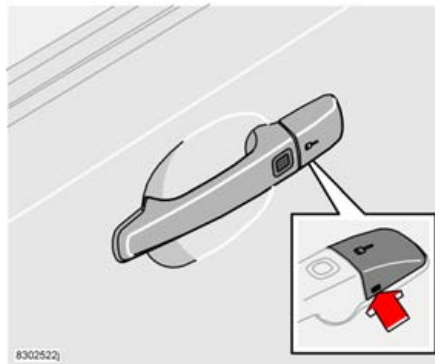
If someone breaks into the car and finds the remote control, it can be activated and used again. It is therefore important to handle all remote controls with care.

Interference to remote control function

Electromagnetic screening and fields can interfere with the keyless drive system. To avoid this:

Do not place the remote control near mobile phones, metallic objects or, for example, in a metal briefcase.

If interference is experienced nonetheless, use the remote control and key blade in the normal way. See page 90.



Unlocking

Unlock the car as follows:

- open one of the doors with the handle or
- open the boot lid by pressing the button.

Unlocking with the key blade

If for some reason the keyless drive function in the remote control is not operating, the driver's door can be opened as follows (central locking system not activated):

- carefully prise out the plastic cover in the right-hand part of the handle by inserting the key blade in the hole on the bottom of the cover.
- unlock the door using the key blade.

Power seat (option) - remote control with memory function

If several people with keyless drive remote controls get into the car, the driver's seat and door mirrors will be adjusted for the person who opens the door first.

Locking

Lock the doors and boot lid as follows:

- push in the lock button on one of the door handles.

All doors and the boot lid must be closed before the lock button is pushed in. Otherwise they will not lock.

When the car is locked, the lock buttons on the inside of the doors retract in the normal way.

Personal settings for Keyless drive

The keyless drive system can be tailored to your personal requirements. Read more about personal settings on page 64.

Locking and unlocking

Locking/unlocking the car from outside

You can lock and unlock all the car's doors and the boot lid simultaneously using the remote control. The driver's door can be unlocked with the key blade.

WARNING!

Be aware that you can be locked in the car if it is locked from the outside.

Automatic relocking

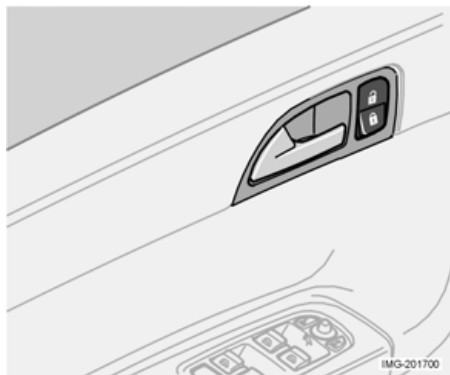
If none of the doors or the boot lid is opened within two minutes of unlocking, all are locked again automatically. This function prevents the car from being left unlocked unintentionally. For cars with alarms, see page 99.

Unlocking the boot lid

Proceed as follows in order to unlock the boot lid only:

- Press the boot lid button on the remote control.

If all of the doors are locked when the boot lid is closed, the boot lid remains unlocked until the car is locked with the remote control or from inside.



be locked manually with their respective lock buttons. Pull the door handle twice to unlock and open the door from the inside.

Locking/unlocking the car from inside

All the doors and the boot lid can be locked or unlocked simultaneously using the switch by the door handle.

Unlocking

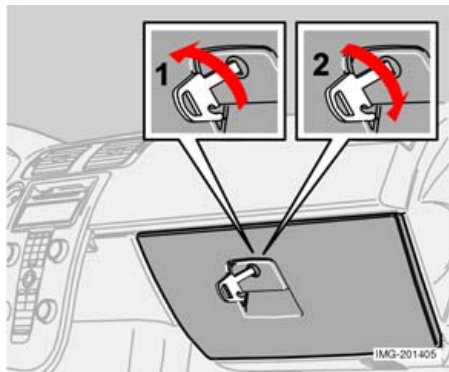
- Press the upper section of the lock button. Press and hold to also open the side windows.

Locking

- Press the lower part of the lock button. Press and hold to also close the windows and sunroof.

It is not possible to unlock a door by pulling up the lock button. All the doors can however

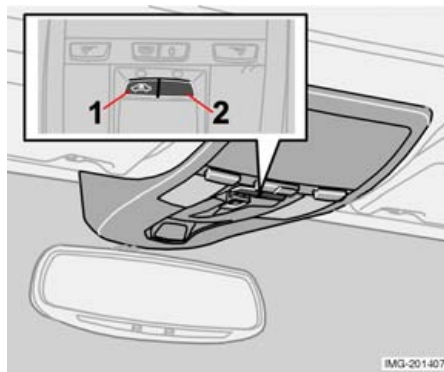
Locking and unlocking



Locking the glovebox

The glovebox can only be locked and unlocked with the removable key blade in the remote control.

- Unlock the glovebox (1) by turning the key a quarter of a turn (90 degrees) anticlockwise. The keyhole is vertical in the unlocked position.
- Lock (2) the glovebox by turning the key a quarter of a turn (90 degrees) clockwise. The keyhole is horizontal in the locked position.



1. Deactivation of the detectors
2. No function

Deadlocks

When deadlocked, the doors cannot be opened from the inside if they are locked. The deadlocks are activated with the remote control. The deadlocks are set after a 25 second delay after the doors are locked.

The car can only be unlocked from a deadlock state with the remote control. The doors can also be opened from the outside with the key.

Temporary deactivation of the deadlocks and any detectors

If someone is going to stay in the car but you still want to lock the doors from the outside, the deadlocks can be disabled.

- Insert the key into the ignition switch, turn it to position **II** and then back to position **I** or **0**.
- Press button 1.

If the car is equipped with an alarm, movement and tilt detectors are also deactivated. See page 100.

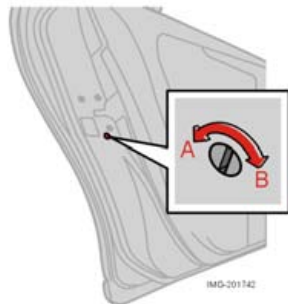
The LED in the button lights up until the car is locked with the key or the remote control. A message remains on the display as long as the key is in the ignition switch. The detectors are reactivated the next time the ignition is switched on.



WARNING!

Do not allow anyone to remain in the car without first deactivating the deadlocks.

Child safety locks



Manual child lock in rear left door.

Manual child locks in the rear doors

To lock manually: The child safety locks are found on the trailing edge of the rear doors and are only accessible when the doors are open. Use the key blade to turn the lock and thus activate or deactivate the child safety lock.

- A. The doors cannot be opened from inside.
- B. The doors can be opened from inside.



Switch for electric child safety locks and disengaging rear power window buttons.

WARNING!

Always keep the lock buttons pulled up when driving. In the event of an accident, this allows the emergency services to get into the car quickly. Passengers in the rear seat cannot open the doors from inside if the child safety locks are activated.

Electric child safety locks and disabling the rear window buttons (option)

Press the switch on the driver's door. A message appears on the information display.

When the electric child safety locks are activated, the rear window buttons are disabled.

To activate the child safety locks:

- Turn the ignition key to position **I** or **II**.
- Press the switch. When the LED in the switch is lit, the rear window buttons are disabled.

A message appears on the information display when the child safety locks are activated.

NOTE! Cars with electric child safety locks do not have manual child locks.

Child safety locks activated

A lit LED together with a text message on the display indicates that the locks are activated. The doors cannot be opened from inside. The power windows can only be operated with the controls on the driver's door.

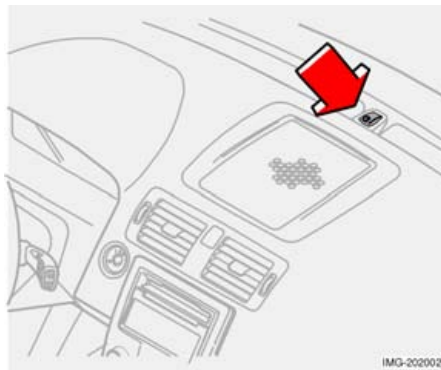
Alarm (option)

The alarm system

When the alarm is armed, it continually monitors all alarm inputs.

The alarm is triggered if:

- a door, the bonnet or the boot lid is opened
- a non-approved key is used in the ignition or if an attempt is made to force the lock
- a movement is detected in the passenger compartment (if fitted with a movement detector)
- the car is raised or towed away (if fitted with a tilt detector)
- a battery cable is disconnected
- anyone tries to disconnect the siren.



Alarm LED on the dashboard

An LED on the dashboard indicates the alarm system's status:

- LED not lit - the alarm is not armed.
- The LED flashes once a second - the alarm is armed.
- The LED flashes rapidly after disarming the alarm and until the ignition is switched on - the alarm has been triggered.

If there is a fault in the alarm system, a message appears on the information display. Contact an authorised Volvo workshop.

If the alarm system does not function correctly, have an authorised Volvo workshop examine the car.

NOTE! Do not attempt to repair or modify alarm system components. All such attempts may affect the terms of insurance.

Arming the alarm

- Press the LOCK button on the remote control. A long flash from the car's direction indicators confirms that the alarm is armed and that all the doors are locked.

Disarming the alarm

- Press the UNLOCK button on the remote control. Two short flashes from the car's direction indicators confirms that the alarm is disarmed and all doors are unlocked.

Automatic alarm activation

This function prevents you accidentally leaving the car without the alarm on.

If none of the doors or the boot lid are opened within two minutes of disarming the alarm (and the car has been unlocked with the remote control), the alarm is automatically rearmed and the car is relocked.

Deactivating a triggered alarm

- Press the UNLOCK button on the remote control or insert the key in the ignition switch.

Alarm (option)

Confirmation is given by two short flashes from the direction indicators.

Alarm signals

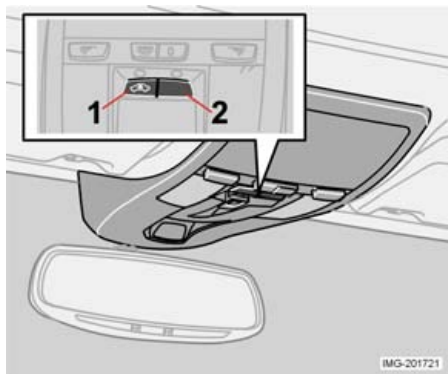
When the alarm is triggered, the following happens:

- A siren sounds for no more than 25 seconds. The siren has its own battery which is used if the car battery has insufficient charge or is disconnected.
- The direction indicators flash for five minutes or until the alarm is deactivated.

Remote control not working

If for some reason the remote control is not working, the alarm can still be switched off and the car started as follows:

- Open the driver's door with the key blade. The alarm is triggered and the siren sounds.
- Insert the remote control into the ignition switch. The alarm is deactivated. The alarm LED flashes rapidly until the ignition key is turned to position **II**.



1. Deactivation of the detectors
2. No function

Temporary deactivation of the deadlocks and detectors

To prevent the alarm being tripped erroneously, such as during a ferry journey, the movement and tilt detectors can be temporarily disengaged.

- Turn the ignition key to position **II** and then back to position **0**. Remove the key.
- Press button (1). The LED in the button is lit until the car is locked.

A message remains on the display as long as the key remains in the ignition switch (and for one minute after the key is removed).

The detectors are reactivated the next time the ignition is switched on.

If the car has deadlocks, these are also re-engaged.

Testing the alarm system

Testing the movement detector in the passenger compartment

- Open all the windows.
- Arm the alarm. Activation of the alarm is confirmed by the alarm LED flashing slowly.
- Wait 30 seconds.
- Test the movement detector in the passenger compartment, such as by lifting out a bag from a seat. A siren should sound and all direction indicators should flash.
- Deactivate the alarm by unlocking the car with the remote control.

Testing the doors

- Arm the alarm.
- Wait 30 seconds.
- Unlock the driver's door with the key blade.
- Open one of the doors. A siren should sound and all direction indicators flash.
- Deactivate the alarm by unlocking the car with the remote control.

Alarm (option)

Testing the bonnet

- Sit in the car and deactivate the movement detector.
- Arm the alarm. Remain in the car and lock the doors with the button on the remote control.
- Wait 30 seconds.
- Open the bonnet with the handle under the dashboard. A siren should sound and all direction indicators flash.
- Deactivate the alarm by unlocking the car with the remote control.

Starting and driving

General	104
Refuelling	105
Starting the car	106
Keyless drive	108
Manual gearbox	109
Automatic gearbox	111
All-wheel drive	114
Brake system	115
Stability system	117
Parking assistance (option)	119
Towing and recovery	121
Start assistance	123
Driving with a trailer	124
Towing equipment	126
Detachable towbar	128
Loading	133
Adjusting headlamp pattern	134

General

Economical driving

Driving economically means driving smoothly while thinking ahead and adjusting your driving style and speed to the prevailing conditions.

- Get the engine warmed up as soon as possible.
- Do not let the engine idle, but drive at light loads as soon as it is possible.
- A cold engine consumes more fuel than a warm one.
- Avoid sudden unnecessary acceleration and heavy braking.
- Do not drive with unnecessary loads in the car.
- Do not use winter tyres when the roads are dry.
- Remove load carriers when they are not being used.
- Avoid driving with open windows.

Slippery driving conditions

Practise driving on slippery surfaces under controlled conditions to learn how the car reacts.

Engine and cooling system

Under special conditions, for example when driving in hilly terrain, extreme heat or with

heavy loads, there is a risk that the engine and cooling system will overheat.

Avoid overheating the cooling system

- Maintain a low speed when driving with a trailer up long, steep ascents.
- Do not turn the engine off immediately you stop after a hard drive.
- Remove any auxiliary lamps from in front of the grille if driving in extreme high temperatures.

Avoid overheating the engine

Do not exceed engine speeds of 4500 rpm (diesel engine: 3500 rpm) if driving with a trailer or caravan in hilly terrain. The oil temperature could then become too high.

Open boot lid

Avoid driving with the boot lid open. If it is necessary to drive with the boot lid open for a short distance:

- Close all windows.
- Set the air distribution to the windscreen and floor and run the fan at high speed.



WARNING!

Do not drive with the boot lid open. Toxic exhaust fumes can be drawn into the car through the cargo area.

Do not overload the battery

The electrical functions in the car load the battery to varying degrees. Avoid having the ignition key in position **II** when the engine is turned off. Use position **I** instead, as less power is used. The 12 volt outlet in the cargo area supplies power even when the ignition key is removed.

Examples of functions that use a lot of power:

- ventilation fan
- windscreen wipers
- audio equipment (high volume)
- parking lights.

Also, be aware of different accessories that load the electrical system. Do not use functions which use a lot of power when the engine is switched off.

If the battery voltage is low, a message appears on the display. The energy-saving function shuts down certain functions or reduces the load on the battery by, for example, slowing the ventilation fan and switching off the audio equipment. Charge the battery by starting the engine.

Refuelling



Switch off the fuel-driven heater before refuelling.

Opening the fuel filler flap

Open the fuel filler flap with the button on the lighting panel, see page 46. The engine must be switched off before the flap can be opened. The fuel flap is located on the rear right wing.

Closing

Push in the flap until you hear a click.

Fuel cap

Turn the fuel cap until an obvious resistance is felt. Turn past the resistance until it comes to a stop. Take out the cap. Hang up the cap on the inside of the fuel filler flap.

Put the petrol cap back after refuelling. Turn until one or more clear clicks are heard.

Filling up with fuel

Fill the tank with fuel until the filler pump cuts out. Too much fuel can overflow in warm weather.

Fuel of a lower quality than that specified on page 219 should not be used as engine power and fuel consumption can be negatively affected.

WARNING!

Fuel which spills on to the ground can be ignited by the exhaust fumes.

Switch off the fuel-driven heater before starting to refuel.

Never carry an activated mobile phone when refuelling the ring signal could cause spark build-up and ignite petrol fumes, leading to fire and injury.

Petrol

IMPORTANT!

Do not add cleaning additives to the petrol, unless recommended by Volvo.

Diesel

At low temperatures (-5°C to -40°C), a paraffin precipitate may form in the diesel fuel, which can lead to ignition problems.

IMPORTANT!

Use special winter grade fuel during cold months.

Starting the car

Depending on the engine temperature when the engine is started, the idling speed after a cold start may be higher than normal for certain engine types. Volvo strives to minimise exhaust emissions by having the engine exhaust system reach the correct operating temperature as quickly as possible.

NOTE! The idling speed can be noticeably higher than normal for certain engine types during cold starting. This is so that the emissions system can reach normal operating temperature as quickly as possible, which minimises exhaust emissions and protects the environment.



WARNING!

Never remove the ignition key from the steering lock while driving or when the car is being towed. The ignition key must be in position **II** when the car is towed. The steering lock could otherwise be activated, making it impossible to steer the car.

Before starting the engine

- Apply the parking brake (handbrake).

Automatic gearbox:

- The ignition key must be in position **II**, depress the brake pedal and move the gear selector to position **P** or **N**.

Manual gearbox:

- Put the gear lever in neutral and hold the clutch pedal fully depressed. This is particularly important in very cold conditions.

Starting the engine

Petrol engine:

- Turn the ignition key to position **III**. If the engine does not start within 5–10 seconds, release the key and try again.

Autostart (T5 automatic)

With the autostart function, there is no need to hold the ignition key (or ignition dial on cars with Keyless Drive, see page 108) in the start position (position **III**) until the engine has started. Turn the ignition key to the start position and then release. The starter motor then works automatically (up to ten seconds) until the engine has started.

Diesel engine:

- Turn the ignition key to position **II**. An indicator symbol¹ on the combined instrument panel will illuminate to indicate

that the engine preheater is activated. Turn the key to position **III** when the indicator symbol goes out.

Diesel particle filter (DPF)

Diesel cars are equipped with a particle filter, which results in more efficient emission control. The particles in the exhaust gases are collected in the filter during normal driving. So-called "regeneration" is started in order to burn away the particles and empty the filter. This requires that the engine has reached normal operating temperature.

Regeneration of the filter takes place automatically at an interval of approximately 300-900 km depending on driving conditions. Regeneration normally takes between 10 and 20 minutes. During this time fuel consumption may increase slightly.

The rear window heater may be activated automatically in order to increase the load on the engine during regeneration without indication.

Regeneration in cold weather

If the car is frequently driven short distances in cold weather then the engine does not reach normal operating temperature. This means that regeneration of the diesel particle filter does not take place and the filter is not emptied.

1. See page 41 for more information.

Starting the car

When the filter has become approximately 80% full of particles, a yellow warning triangle is illuminated on the instrument panel and the message SOOT FILTER FULL SEE MANUAL shown on the dashboard display.

Start regeneration of the filter by driving the car until the engine reaches normal operating temperature, preferably on a main road or motorway. The car should then be driven for approximately 20 minutes more.

When regeneration is complete the warning text is cleared automatically.

Use the parking heater (option) in cold weather so that the engine reaches normal operating temperature more quickly.

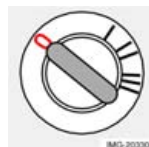
IMPORTANT!

If the filter fills up completely it may become unserviceable. At which point it would be difficult to start the engine and there is a risk that the filter would have to be replaced.

Ignition keys and electronic immobiliser

The ignition key must not hang with other keys or metal objects on the same key ring. The electronic immobiliser could be activated accidentally.

Ignition switch and steering lock



0 - Locked position

The steering lock is activated when the key is removed from the lock.



I - Radio position

Certain electrical components can be switched on. The engine's electrical system is not activated.



II - Driving position

The key position when driving. The car's electrical system is energised.



III - Start position

The starter motor is engaged. Release the key, which springs back automatically to the driving position, once the engine

has started.

A ticking sound may be heard if the key is between positions. Turn the key to position II and back to eliminate the sound.

When the steering lock is activated

If the front wheels are positioned so that there is tension in the steering lock, a warning message may be shown in the information display and the car prohibited from starting.

- Remove the key and turn the steering wheel to release the tension.
- Hold the steering wheel in this position. Reinsert the key and make a new attempt to start the car.

WARNING!

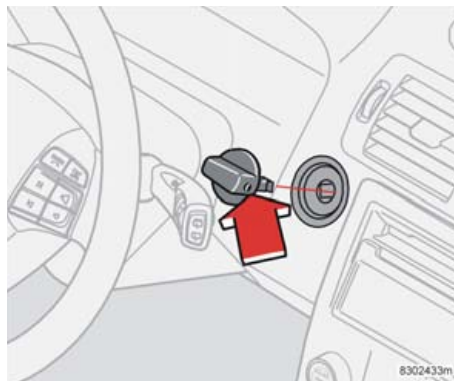
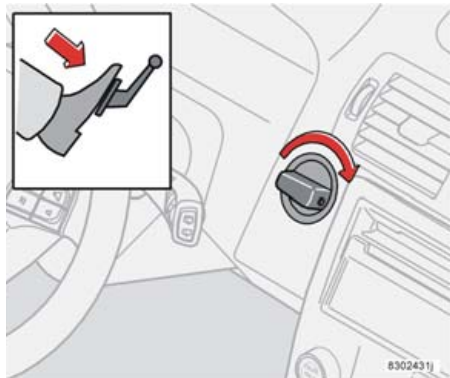
Never remove the ignition key from the ignition switch while driving or when the car is being towed. The steering lock could otherwise be activated, making it impossible to steer the car.

WARNING!

Always remove the ignition key from the ignition when leaving the car, especially if there are children in the car.

Make sure the steering lock is activated when the car is left to reduce the risk of theft.

Keyless drive



Ignition dial or ignition key

The car can be started with the dial or with the key.

To remove the ignition dial:

- Push in the catch and pull out the dial.

Starting the car

Instead of an ignition key, the car has an ignition dial. The dial is used in the same way as the key. The only difference is that to start the car, either the clutch pedal (manual gearbox car) or brake pedal (automatic gearbox car) must be depressed. This is a safety measure.

For the car to start, the car's passive remote control/key must be in the passenger or cargo area.

To start the car:

- Depress the clutch or brake pedal.

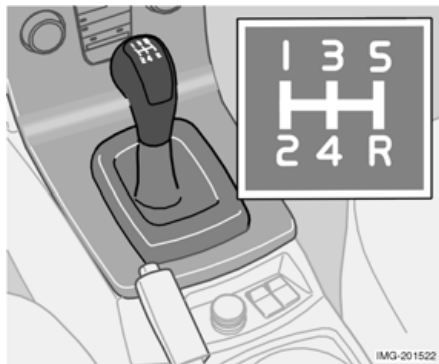
Petrol engine:

- Press in and turn the ignition dial to position **III**.

Diesel engine:

- First turn the ignition dial to position **II**.
Once the diesel indicator symbol in the combined instrument panel (see page 41) has gone out, turn the ignition dial to position **III**.

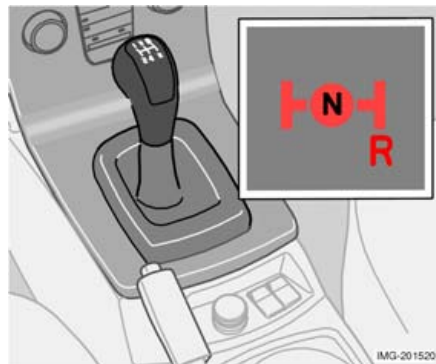
Manual gearbox



Gear positions, five-speed

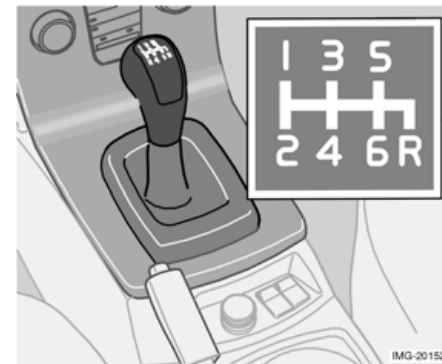
Depress the clutch pedal fully with each gear change. Remove your foot from the clutch pedal between gear changes! Follow the appropriate shifting pattern.

For the best possible fuel economy, use the highest gear possible as often as possible.



Reverse gear inhibitor, five-speed

Only engage reverse gear when the car is stationary. To engage reverse gear, the gear lever must first be put in position **N**. Reverse gear cannot therefore be engaged directly from fifth gear due to the reverse gear inhibitor.



Gear positions, six-speed (petrol)

Depress the clutch pedal fully with each gear change. Remove your foot from the clutch pedal between gear changes! Follow the appropriate shifting pattern.

For the best possible fuel economy, use the highest gear possible as often as possible.

It can be difficult to find the positions for fifth and sixth gear when the car is stationary as the reverse gear inhibitor (which blocks sideways movement towards reverse) is then not activated.

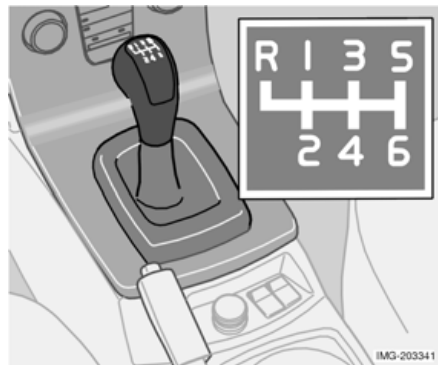
Manual gearbox



Reverse gear inhibitor, six-speed (petrol)

Only engage reverse gear when the car is stationary.

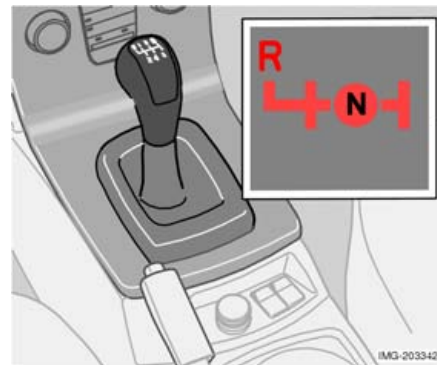
NOTE! Reverse gear is electronically blocked if the car is travelling faster than approx. 20 km/h.



Gear positions, six-speed (diesel)¹

Depress the clutch pedal fully with each gear change. Remove your foot from the clutch pedal between gear changes! Follow the appropriate shifting pattern.

For the best possible fuel economy, use the highest gear possible as often as possible.



Reverse gear inhibitor, six-speed (diesel)

Only engage reverse gear when the car is stationary. Engage reverse gear by pressing down the gear lever and moving it to the left.

1. Certain markets.

Automatic gearbox

Cold start

When starting in low temperatures, the gear changes can sometimes feel hard. This is due to the gearbox oil's viscosity at low temperatures. To minimise engine emissions, the gearbox shifts up later than normal when the engine is started at low temperatures.

NOTE! The idling speed can be noticeably higher than normal for certain engine types during cold starting. This is so that the emissions system can reach normal operating temperature as quickly as possible, which minimises exhaust emissions and protects the environment.

Kick-down

When the accelerator pedal is pressed all the way to the floor, beyond the position normally regarded as full acceleration, a lower gear is immediately engaged. This is known as kick-down.

If the accelerator is released from the kick-down position, the gearbox automatically changes up.

Kick-down is used when maximum acceleration is needed, such as for overtaking.

To prevent overrevving, the gearbox control program has a protective downshift inhibitor which prevents the kick-down function.

The kick-down function cannot be used in manual gear position (Geartronic).

Safety systems

Cars with an automatic gearbox have special safety systems:

Keylock

To remove the ignition key, the gear selector must be in the **P** position. The key is locked in all other positions.

Parking position (P)

Stationary car with engine running:

- Hold your foot on the brake pedal when moving the gear selector to another position.

Electric gear inhibitor - Shiftlock

Parking position (P position)

To be able to move the gear selector from the **P** position to other gear positions, the ignition key must be in position **II** and the brake pedal must be depressed.

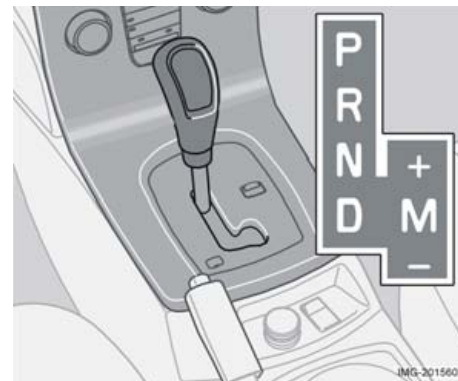
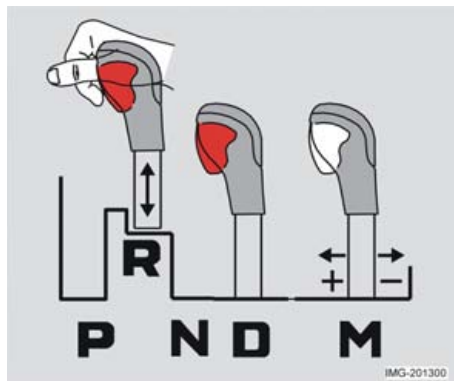
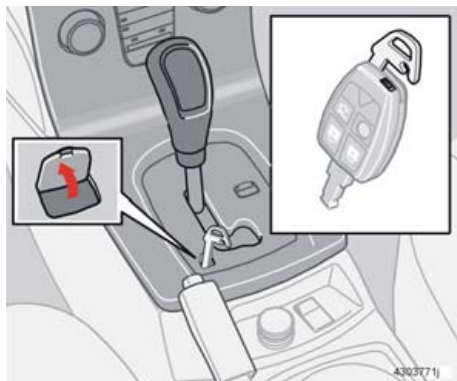
Shiftlock - Neutral (N position)

If the gear selector is in the **N** position and the car has been stationary for at least three seconds (irrespective of whether the engine is running) then the gear selector is locked in the **N** position.

NOTE! To be able to move the gear selector from the **N** position to another gear position,

the brake pedal must be depressed and the ignition key must be in position **II**.

Automatic gearbox



Disengaging shiftlock

In certain cases, it may be necessary to move the car when it is not driveable, for example if the battery is flat. Proceed as follows to move the car:

- There is a small cover behind **P-R-N-D** on the gear selector panel. Open the rear edge.
- Insert the key blade from the remote control. Press down and hold the key blade. The gear selector can now be moved out of the **P** position.

Mechanical gear selector inhibitor

The gear selector can be moved freely between **N** and **D**. Other positions are locked with a latch that is released with the inhibitor button on the gear selector.

The gear selector can be moved between **R**, **N** and **D** by pressing the inhibitor button.

Automatic gear positions

P - Parking position

Select position **P** when you wish to start the engine or park the car.

NOTE! The gear lever can only be moved from position **P** when the brake pedal is depressed.

IMPORTANT!

The car must be stationary when position **P** is selected.

The gearbox is mechanically blocked when the **P** position is engaged. Always apply the parking brake when parking the car.

Automatic gearbox

R – Reverse

The car must be stationary when **R** is selected.

N – Neutral

N is the neutral position. No gear is engaged and the engine can be started. Apply the parking brake when the car is stationary with the gear selector in position **N**.

D – Drive

D is the normal driving position. Shifting up and down between the different gearbox ratios occurs automatically based on the level of acceleration and speed. The car should be stationary when the gear lever is moved from position **R** to position **D**.

Manual positions

To move from the automatic driving position **D** to a manual position, move the gear selector to position **M**. To go from position **M** to the automatic driving position **D**, move the selector to position **D**.

While driving

The manual gearshift mode can be selected at any time while driving. The engaged gear is locked until you choose another gear.

If the gear selector is moved to – (minus) the car changes down a gear and engine brakes at the same time as the accelerator pedal is

released. If the gear selector is moved to + (plus) the car changes up a gear.

The selected gear is indicated on the combined instrument panel (see page 39).

NOTE! Geartronic contains two safety functions:

- Geartronic does not permit downshifting/kick-down which would result in an engine speed high enough to damage the engine. Nothing happens if the driver tries to shift down in this way. The original gear remains engaged.
- Geartronic automatically shifts down if the driver allows the speed to decrease lower than a level suitable for the selected gear, in order to avoid jerking and stalling.

W – Winter



The **W** button is used to activate and deactivate the winter programme **W**. Display of the **W** symbol in the combined instrument panel indicates that the

winter programme is active.

The winter programme starts the gearbox in a higher gear to facilitate starting off on slippery surfaces. The lower gears are only activated with kick-down when the winter programme is engaged.

The **W** programme can be selected regardless of the position of the gear selector, but is only operational when the selector is in position **D**.

To prevent overrevving, the gearbox control program has a protective downshift inhibitor.

All-wheel drive

All-wheel drive - AWD

All-wheel drive is always engaged.

All-wheel drive means that all four road wheels are driven at the same time. Power is automatically distributed between front and rear wheels. An electronically controlled clutch system distributes the power to the pair of wheels that grips best. This provides the best traction and prevents wheel spin.

Under normal driving conditions, the majority of power is transmitted to the front wheels.

All-wheel drive improves driving safety in rain, snow and icy conditions.

Brake system

Brake servo

If the car is rolling or is being towed with the engine turned off, the brake pedal must be pressed about five times harder than when the engine is running. If the brake pedal is pressed when the engine is started, you will feel the pedal drop. This is normal and due to the brake servo becoming active. This may be more noticeable if the car has emergency brake assistance (EBA).

NOTE! If braking with the engine switched off, press the brake pedal sharply once, not repeatedly.

WARNING!

The brake servo only works when the engine is running.

Brake circuits



This symbol lights if a brake circuit is not working.

If a fault should occur in one of the circuits, it is still possible to brake the car. The brake pedal will travel further and may feel softer than normal. Harder pressure on the pedal is needed to produce the normal braking effect.

Dampness can affect braking characteristics

Brake components become wet when the car is driven in heavy rain, through pools of water or when the car is washed. This may alter brake pad friction characteristics so that there is a delay before braking effect is noticed.

Press the brake pedal lightly from time to time if driving for long stretches in rain or slushy snow, as well as after setting off in very damp or cold weather. This warms up the braking surfaces and dries off any water. It is also recommended to do this before parking the car for a long period in such weather conditions.

If the brakes are used heavily

When driving in the Alps or other roads with similar characteristics, the car's brakes are heavily loaded even if the brake pedal is not being depressed especially hard.

Because speed is often low, the brakes are not cooled as effectively as when driving on flat roads at higher speed.

So as not to overload the brakes, shift down when driving downhill instead of using the foot brake. Use the same gear driving downhill as you would use driving uphill. This

using engine braking more efficiently and requires the foot brake for only brief periods.

Bear in mind that driving with a trailer puts an additional load on the car's brakes.

Anti-lock braking system (ABS)



The anti-lock braking system (ABS) prevents the wheels from locking up under braking.

This means the ability to steer is maintained and it is easier to swerve to avoid a hazard, for example.

After the engine has been started, the ABS will perform a brief self-test at a speed of about 20 km/h. This can be felt and heard as pulses in the brake pedal.

To get the most out of the ABS:

- Press brake pedal with full force. Pulses will be felt.
- Steer the car in the direction of travel. Do not release the pressure on the pedal.

Practice braking with the ABS system in a traffic-free area and in different weather conditions.

The ABS symbol lights up:

- for about two seconds when the car is started if the ABS is disengaged due to a fault.

Brake system

Emergency brake assistance - EBA

(Emergency brake assistance) In case of sudden braking, full-strength braking is provided instantaneously. The EBA function senses when heavy braking is underway by registering how quickly the brake pedal is depressed. Continue braking without easing off on the brake pedal. The function is suspended when the pressure on the brake pedal eases. This function is always active and cannot be disengaged.



WARNING!

If the BRAKE and ABS warning symbols are lit at the same time, a fault may have occurred in the brake system. If the level in the brake fluid reservoir is normal, drive carefully to the nearest authorised Volvo workshop to have the brake system checked.

If the brake fluid is under the MIN level in the brake fluid reservoir, do not drive further before topping up the brake fluid. The reason for the loss of brake fluid must be investigated.

Stability system

When the system is in action, it may seem like the car does not respond normally to acceleration. This is because the system detects the amount of friction on the road surface and allows the different stability system functions to operate.

The car is either equipped with the stability and traction control system (STC) – or the dynamic stability and traction control system (DSTC).

Function/ system	STC	DSTC ¹
TC	X	X
SC	X	X
AYC		X

1. Option on certain markets.

Traction Control - (TC)

The Traction Control function transfers power from the spinning drive wheel to the drive wheel which has grip by braking the spinning drive wheel. To increase forward traction in this situation, it may be necessary to depress the accelerator more than usual. A pulsing sound is heard when Traction Control is working. This is completely normal. The TC function is most active at low speeds. It cannot be deactivated.

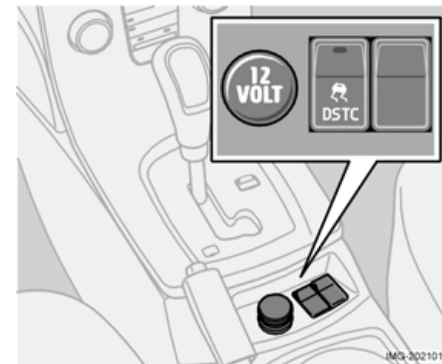
Spin Control - (SC)

The Stability Control function prevents the drive wheels from slipping during acceleration. This improves road safety on slippery surfaces. Under certain conditions, such as when driving with snow chains or in deep snow or sand, it may be beneficial to deactivate the SC function to increase traction. This is done with the STC/DSTC button.

Active Yaw Control - (AYC)

The Active Yaw Control function automatically brakes one or more wheels to stabilise the car in the event of a skid. If the brake pedal were to be depressed in this situation, it would feel more rigid than usual and a pulsing sound would be heard.

The AYC function is always active and cannot be deactivated.



STC/DSTC button

The STC/DSTC button in the centre console is used to suppress or reactivate the system. When the LED in the button is lit, the system is active. The LED in the button goes out when the stability system has been suppressed. Other functions are not affected.

NOTE! To suppress the STC or DSTC function, the button must be pressed and held for at least half a second. The LED in the button goes out and STC/DSTC SPIN CONTROL OFF appears on the information display. The system is automatically activated every time the engine is started.

Stability system

Symbols on the combined instrument panel



The symbol illuminates and goes out again after about 2 seconds

The symbol is lit for a system check when the car is started.



Flashing warning symbol

The SC function is operating to prevent the car's drive wheels from spinning. The TC function is operating to improve the car's traction. The AYC function is operating to prevent skidding.



The information symbol comes on and stays lit

TRACTION CONTROL TEMPORARILY OFF is shown in the information display together with the symbol. The TC function has been temporarily reduced due to too high brake temperature.

Automatic reactivation of the function takes place when the brake temperature has returned to normal.



The information symbol comes on and stays lit

ANTI-SKID SERVICE REQUIRED appears on the information display

together with the symbol. The STC or DSTC system has been switched off because of a fault.

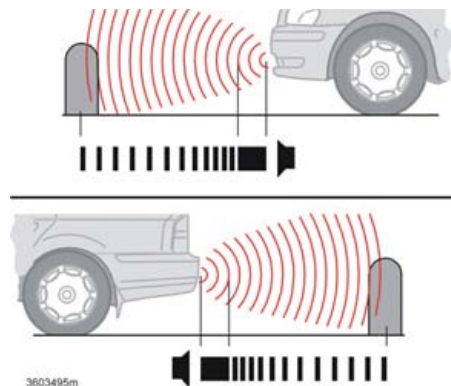
- Stop the car in a safe place and turn off the engine.
- Restart the engine.
- If the warning symbol remains lit, drive to a workshop to have the system checked.



WARNING!

Suppressing the STC or DSTC system may alter the driving characteristics of the car. Always take care when cornering and driving in slippery conditions.

Parking assistance (option)



Parking assistance front and rear.

General

Parking assistance is used as an aid to parking. A signal indicates the distance to a detected object.

The frequency of the signal increases as you come closer to an object¹ in front of or behind the car.

The tone becomes constant at a distance of about 30 cm. If there are objects within this distance both behind and in front of the car, the signal alternates between front and rear speakers.

If the volume of another sound source from the audio system is high, this is automatically lowered.

The system is always active when the car is started and the text message "Park Assist active Exit to deactivate" appears on the audio display.



WARNING!

Parking assistance does not relinquish the driver's own responsibility during parking. The sensors have blind spots where objects cannot be detected. Be aware of children and animals near the car.

Front parking assistance

The distance covered to the front of the car is about 0.8 m.

Front parking assistance cannot be combined with extra lights because the sensors are affected by the extra lights.

Rear parking assistance

The distance covered to the rear of the car is about 1.5 m.

NOTE! The system must be deactivated when driving with a trailer, bike carrier on the towbar or similar as they would trigger the sensors.

Rear parking assistance is deactivated automatically when towing a trailer if a Volvo genuine trailer cable is used.

Deactivating and reactivating the parking assistance

The parking assistance can be deactivated by pressing EXIT on the control panel, see page 64. "Park Assist deactivated Enter to activate" will appear on the audio display. The parking assistance can be reactivated by pressing ENTER on the control panel. "Park Assistance active Exit to deactivate" will then appear on the audio display.

Front parking assistance

The front parking assistance is active at speeds of below 15 km/h, even during reversing.

The signal comes from the front loudspeakers.

Rear parking assistance

Rear parking assistance is activated when reverse gear is engaged. If the system is switched off, the text "Park Assist deactivated Enter to activate" will appear on the display as soon as reverse gear is engaged.

The signal comes from the rear loudspeakers.

1. Provided that the parking assistance is mounted both front and rear.

Parking assistance (option)

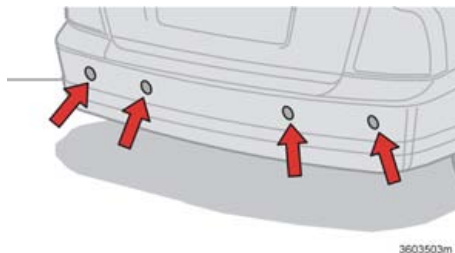
Fault indicator



The information symbol comes on and stays lit

PARK ASSIST SERVICE

REQUIRED is shown on the information display in the centre of the combined instrument panel together with the symbol.



IMPORTANT!

In certain conditions the parking assistance system may produce incorrect warning signals that are caused by external sound sources that emit the same ultrasonic frequencies that the system works with. Examples of such sources include horns, wet tyres on asphalt, pneumatic brakes and motorcycle exhaust pipes. This does not indicate any fault in the system.

Parking assistance sensors.

Cleaning the sensors

The sensors must be cleaned regularly to ensure that they work properly. Clean them with water and car shampoo.

Ice and snow covering the sensors may cause them to react incorrectly.

Towing and recovery

Never tow the car to bump start it

Jump start the car with a donor battery if the battery is flat and the engine does not start. Do not bump start the car.

IMPORTANT!

Bump starting the car can damage the catalytic converter.

Towing

Find out the highest legal speed for towing before towing the car.

- Turn the ignition switch to position **II** and unlock the steering lock so that the car can be steered, see page 106.
- The ignition key must remain in position **II** while the car is being towed.

Automatic gearbox:

- Move the gear selector to position **N**.

Manual gearbox:

- Move gear lever into neutral.
- Ensure the towrope is always taut to avoid violent jerks. Keep your foot on the brake pedal.

Cars with automatic gearbox must not be towed at speeds above 80 km/h or further than 80 km. The car must always be towed facing forward.

WARNING!

The steering lock stays in the position it was in when the power was cut off. The steering lock must be unlocked before towing.

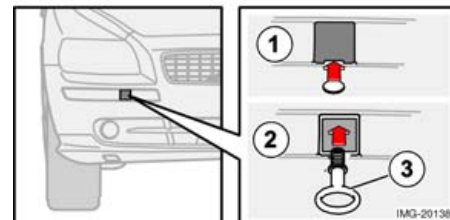
The ignition key must be in position **II**. Never remove the ignition key from the ignition switch while driving or when the car is being towed.

WARNING!

The brake servo and power steering do not work when the engine is switched off. The brake pedal must be pressed about five times harder than normal, and the steering will be considerable heavier than normal.

Recovery

If only partially raised, cars with automatic gearbox must not be transported at speeds above 80 km/h or further than 80 km. During such transport, the wheels must always roll forward.



Towing eye

Use the towing eye if the car needs to be towed on the road. The towing eye is attached in the recess on the right-hand side of the front or rear bumper. To fit the towing eye:

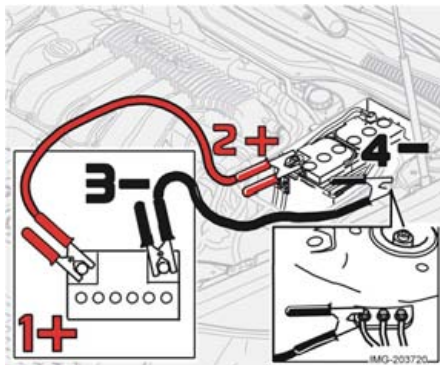
- Take out the towing eye. This is stored under the floor hatch in the cargo area.
- Release the bottom edge of the cover on the bumper with a screwdriver or coin.
- Screw in the towing eye properly, right up to the flange. Use the wheel wrench to tighten the towing eye.
- After use, unscrew the towing eye and return it in the cargo area. Refit the cover on the bumper.

Towing and recovery

IMPORTANT!

The towing eye is only designed for towing on roads, not for pulling the car unstuck or out of a ditch. Call a recovery service for assistance.

Start assistance



Starting with a donor battery

If the battery in the car has become flat, you can "borrow" electric current from either a separate battery or the battery in another car. Always make sure the crocodile clips on the jump leads are attached securely to eliminate sparks during the start attempt.

When jump starting the car, the following steps are recommended to avoid risk of explosion:

- Turn the ignition key to position **0**.
- Ensure that the other battery is 12 volt.
- If the donor battery is in another car, switch off the engine in the other car and

ensure that the cars do not touch one another.

- Connect the red jump lead between the positive terminal on the donor battery (1+) and the one in your car (2+).
- Connect one end of the black jump lead to the donor battery's negative terminal (3-).
- Connect the other end of the black jump lead to the earthing point (4-) by the left-hand strut tower.
- Start the engine of the "donor car". Let the engine run a few minutes at a speed slightly higher than idle 1500 rpm.
- Start the engine of the car with the flat battery.
- Remove the jump leads, first the black and then the red. Ensure that neither end of the black jump lead comes into contact with the battery's positive terminal or the crocodile clip on the red jump lead.

Do not touch the crocodile clips during the start procedure. This could cause sparking.

WARNING!

The battery can generate oxyhydrogen gas, which is highly explosive. One spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode.

The battery contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical attention immediately.

Driving with a trailer

General

The load capacity is affected by extra accessories mounted on the car, such as a towbar, the load on the towball (75 kg with trailer hitched), load carriers and roof box, as well as the passengers' combined weight. The load capacity of the car is reduced by the number of passengers and their weight.

If the towing bracket is mounted at the Volvo factory, the car is delivered with the necessary equipment for driving with a trailer.

- The car's towing bracket must be of an approved type.
- If the towbar is retrofitted, check with your Volvo dealer that the car is fully equipped for driving with a trailer.
- Distribute the load on the trailer so that the weight on the towing bracket follows the specified maximum towball load.
- Increase the tyre pressure to the recommended pressure for a full load. See page 140 for the location of the tyre pressure label.
- Clean the towbar regularly and grease the towball¹.

- Do not tow a heavy trailer when the car is brand new. Wait until it has been driven at least 1000 km.
- The brakes are loaded much more than usual on long and steep downhill slopes. Downshift to a lower gear and adjust your speed.
- The engine is loaded more heavily than usual when driving with a trailer.
- The engine and gearbox can overheat if the car is driven with a heavy load in hot weather. If the temperature gauge for the engine's cooling system goes into the red zone, stop and let the engine idle for a few minutes. The automatic gearbox responds through a built-in protection system. See the message on the information display. If the car overheats, the air conditioning may be switched off temporarily.
- In the interests of safety, speed should be restricted to 80 km/h, even if the laws of certain countries allow for higher speeds.
- Move the gear selector to parking position **P** when parking an automatic car with a hitched trailer. Always use the parking brake. Block the wheels with chocks when parking a car with hitched trailer on a hill.

Trailer weights

See page 209 for permitted trailer weights.

NOTE! The stated maximum permitted trailer weights are those permitted by Volvo. National vehicle regulations can further limit trailer weights and speeds. Towbars can be certified for higher towing weights than the car can actually tow.



WARNING!

Follow the stated recommendations for trailer weights. Otherwise, the rig may be difficult to control during evasive manoeuvres and braking.

1. Does not apply to the towball if using a stabiliser hitch.

Driving with a trailer

Automatic gearbox, driving with a trailer

Parking on a hill:

- Apply the parking brake (handbrake).
- Move the gear selector to parking position **P**.

Starting on a hill:

- Move the gear selector to driving position **D**.
- Release the parking brake (handbrake).

Steep inclines:

- Select an appropriate manual gear position when climbing steep inclines or at low speeds. This prevents the gearbox from changing up and keeps the gearbox oil cooler.
- Do not use a higher manual gear than the engine can "handle". It is not always economical to drive in high gears.
- Avoid driving with a trailer on inclines of more than 15 %.

Diesel engine with manual gearbox, driving with a trailer

If the car is driven with a major load in a hot climate, the engine cooling fan can be replaced with one of a greater capacity than the standard model. This avoids temporary shut-off of the air conditioning and temporary

lowering of engine torque. Check with your nearest Volvo dealer regarding the options for your car.

Towing equipment

Towbars

The towball must be cleaned and greased regularly. If a towball hitch with vibration damper is used, it is not necessary to grease the towball.

If the car is equipped with a detachable towbar, the towball mounting instructions must be followed carefully, see page 128.

NOTE! Always take off the towball section after use. Keep it in the cargo area.

WARNING!

Be sure to attach the trailer's safety cable to the correct place.

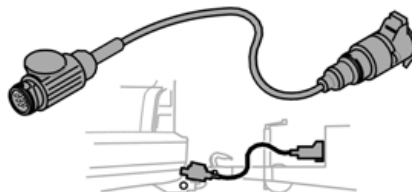
WARNING!

If the car is fitted with a Volvo detachable towbar:

Follow the assembly instructions for the towball section carefully.

The towball section must be locked with the key before setting off.

Check that the indicator window shows green.

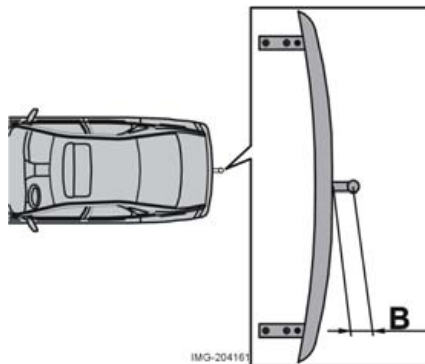
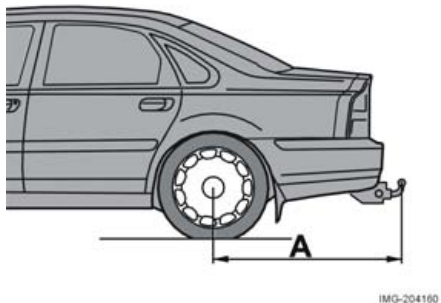


IMG-201504

Trailer cable

An adapter is required if the car's towbar has 13 pin electrics and the trailer has 7 pin electrics. Use an adapter cable approved by Volvo. Make sure the cable does not drag on the ground.

Towing equipment



Specifications

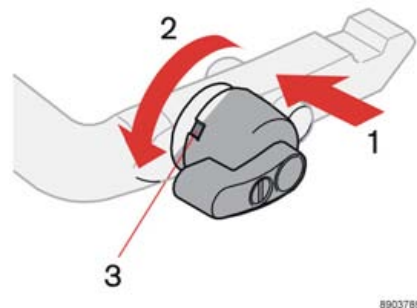
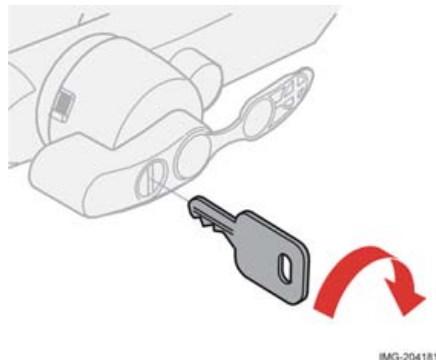
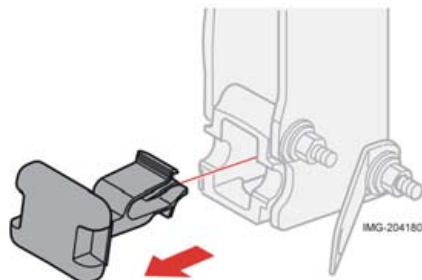
Distance A

Fixed towbar:	1055 mm
Detachable towbar:	1055 mm
Maximum towball load:	75 kg

Distance B

Fixed towbar:	72 mm
Detachable towbar:	72 mm

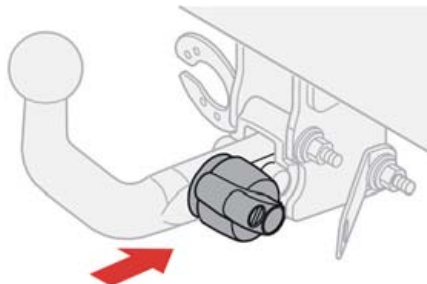
Detachable towbar



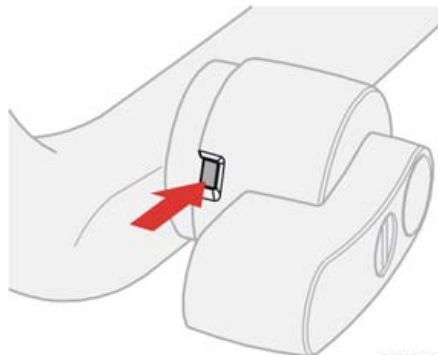
Fitting the towball

- Remove the guard plug.
- Ensure that the mechanism is in the unlocked position by turning the key clockwise.
- Check that the indicator window (3) shows red.
If the window does not show red, press in (1) and turn the locking wheel anticlockwise (2) until you hear a click.

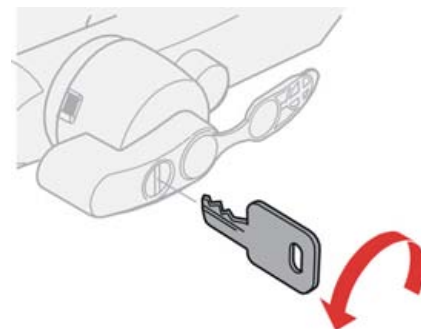
Detachable towbar



IMG-204183



IMG-204184



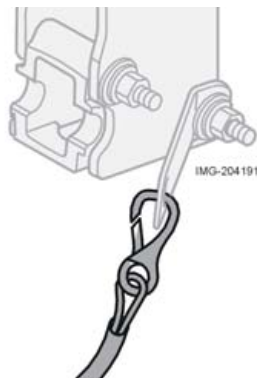
IMG-204185

- Insert the towball section until you hear a click.
- Check that the indicator window shows green.
- Turn the key anticlockwise to the locked position. Remove the key from the lock.

Detachable towbar

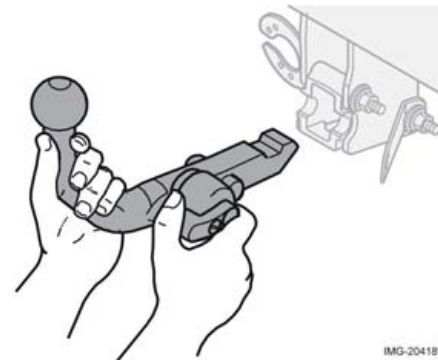
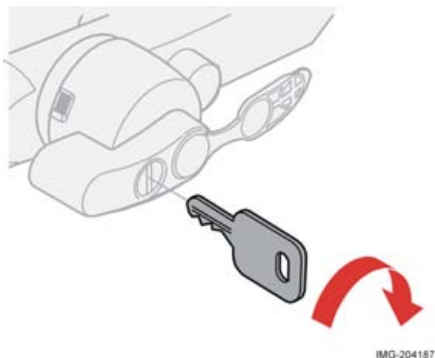


NOTE! Check that the towball section is secure by pulling it up, down and back. If the towball section is not fitted correctly then it must be removed and refitted in accordance with the previous steps.



NOTE! The trailer's safety cable must be attached to the attachment on the towbar.

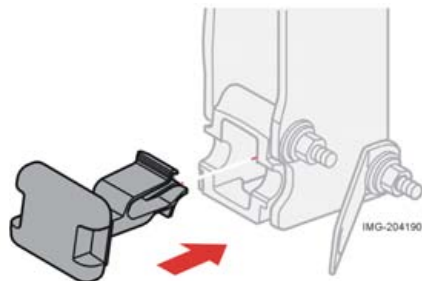
Detachable towbar



Removing the towball

- Insert the key and turn it clockwise to the unlocked position.
- Push in the locking wheel and turn it anticlockwise until you hear a click.
- Turn the locking wheel down fully, until it comes to a stop. Hold it in this position while pulling the towball rearward and upward.

Detachable towbar



- Insert the guard plug.

Loading

General

The load capacity is affected by extra accessories mounted on the car, such as a towbar, the load on the towball (75 kg with trailer hitched), load carriers and roof box, as well as the passengers' combined weight. The car's load carrying capacity is reduced by the number of passengers and their weight.

WARNING!

The car's driving characteristics change depending on how heavily it is loaded and how the load is distributed.

Loading the cargo area

Stop the engine and apply the parking brake when loading or unloading long objects. The gear lever or gear selector can be knocked out of position by long loads, which could set the car in motion. To increase the size of the cargo area, the head restraints can be removed and the seats folded down, see page 86.

Place the load firmly against the backrest in front.

- The head rests can be removed so that they are not damaged.
- Put wide loads in the centre.

- Heavy objects should be placed as low as possible. Avoid placing heavy loads on a lowered backrest.
- Cover sharp edges with something soft to avoid damaging the upholstery.
- Secure all loads to the load retaining eyelets with straps or web lashings.

WARNING!

A loose object weighing 20 kg can, in a frontal collision at a speed of 50 km/h, carry the impact of an item weighing 1000 kg.

WARNING!

Never load cargo above the backrest. The protection provided by the inflatable curtain in the headlining may be compromised or eliminated by high loads. Always secure the load. During heavy braking the load may otherwise shift, causing personal injury.

Load carriers

To avoid damaging the car and for maximum possible safety while driving, it is recommended to use load carriers specially designed for your car by Volvo.

Carefully follow the mounting instructions supplied with the carriers.

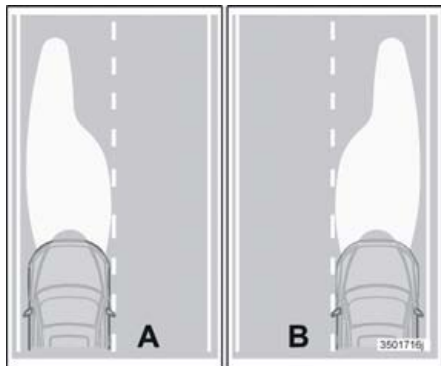
- Check periodically that the load carriers and load are properly secured. Lash the load securely with retaining straps.
- Distribute the load evenly over the load carriers. Put the heaviest objects at the bottom.
- The size of the area exposed to the wind, and therefore fuel consumption, increase with the load's size.
- Drive gently. Avoid quick accelerations, heavy braking and taking curves hard.

WARNING!

Load no more than 75 kg on the roof, inclusive of the load carriers and any roof box.

The car's centre of gravity and driving characteristics are altered by roof loads.

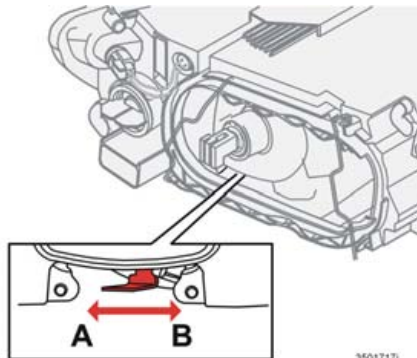
Adjusting headlamp pattern



*A. Headlamp pattern for left-hand traffic
B. Right-hand traffic*

Correct light pattern for left or right-hand traffic

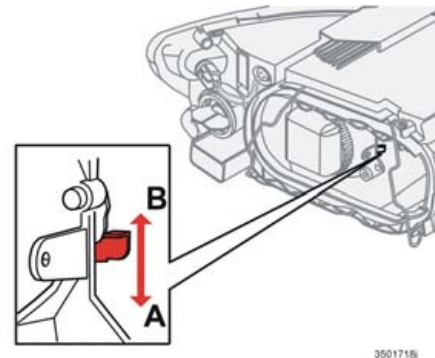
The headlamps' projection can be adjusted to avoid dazzling other motorists. The correct pattern will also better illuminate the verge.



Halogen lights

Halogen headlamps

The headlamp control should be in position (A) for left-hand traffic and position (B) for right-hand traffic.



Bi-Xenon lights

Bi-Xenon headlamps

The headlamp control should be in position (A) for left-hand traffic and position (B) for right-hand traffic.



WARNING!

On cars with Bi-Xenon headlamps, all work on the lights should be carried out at an authorised Volvo workshop. Bi-Xenon headlamps must be handled with extreme care due to the high-voltage unit.

Wheels and tyres

General	136
Tyre pressure	140
Warning triangle and spare wheel	141
Changing wheels	143
Emergency puncture repair	145

General

Driving characteristics and tyres

The tyres greatly affect the car's driving characteristics. The type of tyre, dimensions, tyre pressure and speed rating are important for how the car performs.

When changing tyres, ensure that tyres of the same type and dimensions, and preferably also the same make, are fitted to all four wheels. Follow the recommended tyre pressures specified on the tyre pressure label, see page 140.

Designation of dimensions

The dimensions are stated on all car tyres. Example: 205/55R16 91 W.

205	Section width (mm)
55	Ratio between section height and width (%)
R	Radial ply
16	Rim diameter in inches (")
91	Tyre load index (in this case 615 kg)
W	Speed rating (in this case 270 km/h).

Speed ratings

The car is approved as a whole, which means that dimensions and speed ratings must not differ from those specified on the vehicle's registration document. The only exception to these conditions is winter tyres (both those with metal studs and those without). If such a

tyre is chosen, the car must not be driven faster than the speed rating of the tyre (for example, class Q can be driven at a maximum of 160 km/h).

Remember that traffic regulations determine how fast a car can be driven, not the speed class of the tyres.

Note! Maximum permitted speeds indicated.

Q	160 km/h (used only on winter tyres)
T	190 km/h
H	210 km/h
V	240 km/h
W	270 km/h
Y	300 km/h

New tyres



Tyres are perishable. After a few years they begin to harden at the same time as the friction capacity/characteristics gradually deteriorate. Therefore aim to get as fresh tyres as possible when you replace them. This is especially important with regard to winter tyres. The week and year of manufacture, the tyre's DOT marking (Department of Transportation), are stated with four digits, for example 1502. The tyre in

the illustration was manufactured in week 15 of 2002.

Tyre age

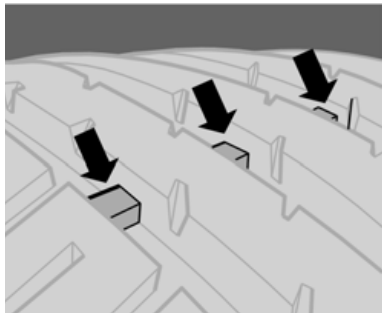
All tyres older than six years should be checked by an expert even if they seem undamaged. The reason for this is that tyres age and decompose, even if they are hardly ever or never used. The function can therefore be affected due to the tyre's constituent materials being broken down. The tyre should then not be used.

This also applies to spare tyres, winter tyres and tyres saved for future use.

Examples of external signs which indicate that the tyre is unsuitable for use are cracks or discolouration.

The age of the tyre can be determined by the DOT marking, see illustration above.

General



Tyres with tread wear indicators

Tread wear indicators are narrow treadless bands across the width of the tread. On the side of the tyre are the letters TWI (tread wear indicator). When only 1.6 mm of tread remains, this band is clearly visible. Change the tyres as soon as possible. Remember that tyres with little tread depth provide very poor grip in rain and snow.

Winter tyres

Volvo recommends winter tyres with particular dimensions. These are stated on the tyre pressure label; see page 140 for its location. The tyre dimensions are dependent

on the engine variant. When driving on winter tyres, these must be fitted to all four wheels.

NOTE! Ask a Volvo dealer which rim and tyre types are most suitable.

Studded tyres

Studded winter tyres should be run in gently for 500-1000 km so the studs settle properly into the tyre. This gives the tyre, and especially the studs, a longer lifespan.

NOTE! The legal provisions for the use of studded tyres vary from country to country.

Tread depth

Road conditions with ice, slush and low temperatures place considerably higher demands on tyres than summer conditions. It is therefore not recommended to drive on winter tyres that have a tread depth of less than four millimetres.

Snow chains

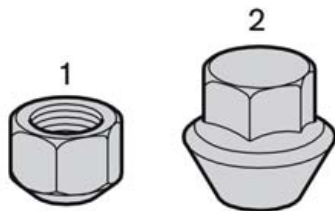
Snow chains may only be used on the front wheels. This also applies to all-wheel-drive cars.

NOTE! Never drive faster than 50 km/h with snow chains. Avoid driving on bare ground as this wears out both the snow chains and tyres. Never use quick-fit snow chains as the space between the brake disks and the wheels is too small.

IMPORTANT!

Use Volvo genuine snow chains or equivalent chains designed for the car model, and tyre and rim dimensions. Consult an authorised Volvo workshop

General



Standard (1) and bulge acorn (2) wheel nuts.

Rims and wheel nuts

Only use rims that are tested and approved by Volvo and which are Volvo genuine accessories. There are two types of wheel nut, depending on whether the rims are made of steel or aluminium. Tighten the wheel nuts to 90 Nm. Check the torque with a torque wrench.

IMPORTANT!

The wheel nuts should be tightened to 90 Nm. Overtightening can damage the nuts and the bolts.

Steel rims - standard wheel nuts (1)

Steel rims are normally mounted with the standard wheel nuts, but the bulge acorn variety may also be used.



WARNING!

Never use standard nuts for aluminium rims. The wheels can come loose.

Aluminium rims - bulge acorn wheel nuts (2)

Only use the bulge acorn variety of nuts with aluminium rims. These differ markedly from other nut types as they have a rotating conical washer.

NOTE! These nuts may also be used with steel rims.

Locking wheel nuts

Locking wheel nuts can be used on both aluminium and steel rims. If steel rims with locking nuts are used in combination with wheel covers, the locking wheel nut should be mounted on the bolt nearest the air valve. Otherwise the wheel cover cannot be fitted to the rim.

Temporary spare

The spare wheel¹ is only intended to be used for the short time it takes to get the ordinary wheel replaced or repaired. Replace the spare wheel as soon as possible with a normal wheel. The car's handling may be altered by the use of the spare wheel.

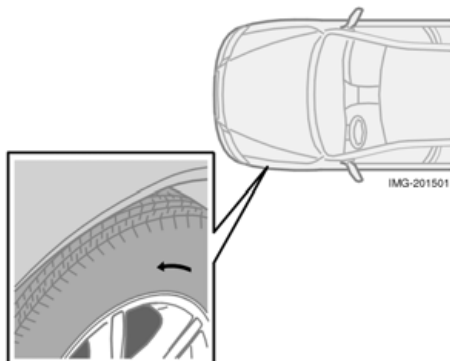
Never drive faster than 80 km/h with a spare wheel on the car

IMPORTANT!

The car must never be driven fitted with more than one temporary spare wheel.

1. Certain variants and markets.

General



The arrow shows the tyre's direction of rotation.

Summer and winter wheels

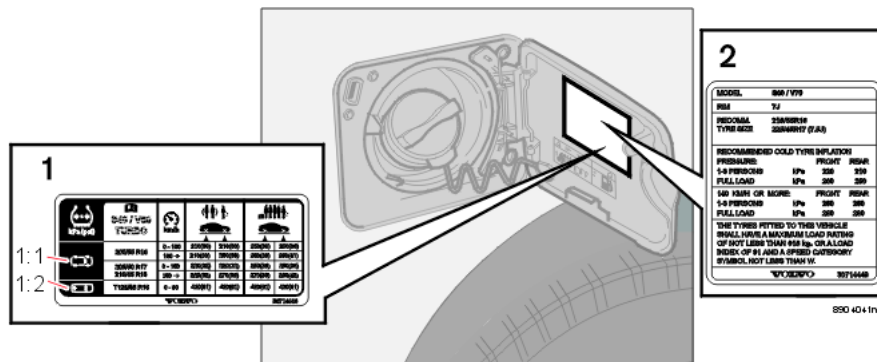
When summer and winter wheels are changed they should be marked with which side of the car they were mounted on, for example **L** for left and **R** for right. Tyres with tread patterns that are designed to only turn in one direction have the direction of rotation marked with an arrow. The tyre should always rotate in the same direction throughout its lifespan. Tyres should only be switched between front and rear positions, never between left and right-hand sides, or vice versa. If the tyre is mounted incorrectly, the car's braking characteristics and capacity to force rain, snow and slush out of the way are

adversely affected. Tyres with the greatest tread depth should always be fitted to the rear of the car (to decrease the risk of skidding).

Wheels should be stored lying down or hanging up, and not standing up.

Contact an authorised Volvo workshop if you are uncertain about tread depth.

Tyre pressure



Recommended tyre pressure

The tyre pressure decal on the inside of the fuel filler flap shows what pressure the tyres should have with different load and speed conditions.

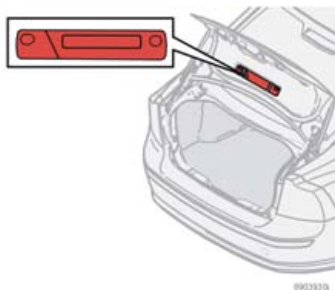
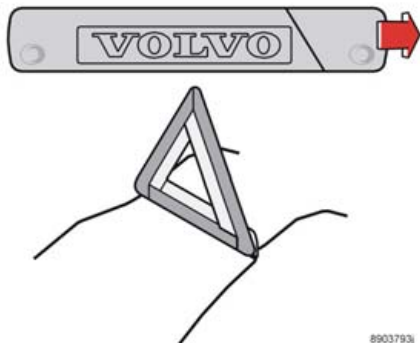
1. All countries except USA, Canada and Australia.
1:1. Volvo Genuine tyre
1:2. Spare tyre
2. Australia

Checking the tyre pressure

Check the tyre pressure regularly. The correct tyre pressure is shown in the tyre pressure table. The stated tyre pressures refer to cold tyres. (Cold tyres mean the tyres are the same temperature as the ambient temperature.)

Driving with the wrong tyre pressure adversely affects the car's driving characteristics and can increase tyre wear. After just a few kilometres of driving, the tyres warm up and the pressure increases. Therefore air should not be released if the pressure is checked when the tyres are warm. However the pressure should be increased if it is too low.

Warning triangle and spare wheel



Warning triangle

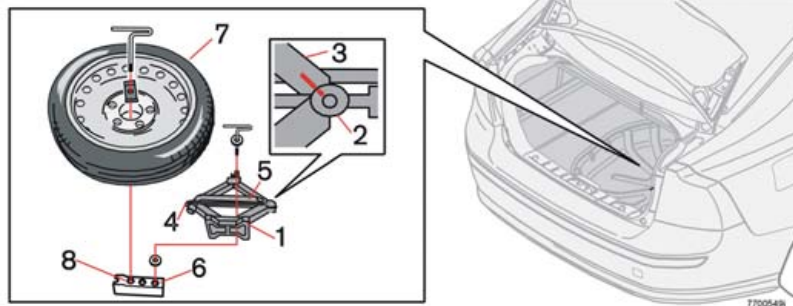
The warning triangle is fitted on the inside of the boot lid with two clips.

Follow the regulations for the use of a warning triangle. Position the warning triangle in a suitable place with regard to traffic.

- Undo the case containing the warning triangle. Take the warning triangle out of the case.
- Lower the warning triangle's support legs.

Ensure the warning triangle and its case are properly secured in the cargo area after use.

Warning triangle and spare wheel



Spare wheel and jack

The car's original jack

The original jack should only be used for changing wheels. The jack's thread should always be well greased.

The spare wheel, jack and wheel spanner are found under the floor in the cargo area.

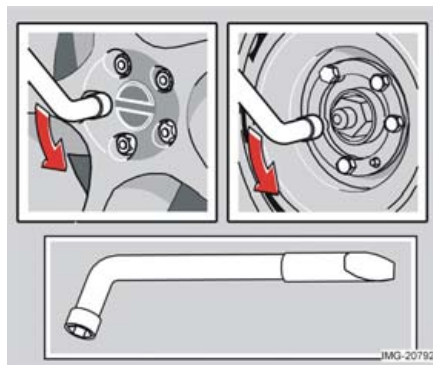
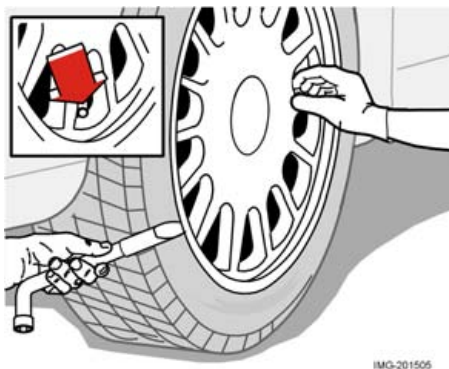
Taking out the spare wheel:

- Fold the rear edge of the floor mat forward.
- Release the spare wheel and lift it out.
- Take out the jack and the wheel spanner.

Putting the spare wheel and jack into the cargo area:

- Wind the jack to halfway (1). The marking on the plate (2) should line up with the marking on the arm (3) so that the jack can fit lying down in the holder.
- Fold in the handle (4) and place the wheel spanner (5) on the jack.
- Put the jack back (1) in the hole on the right (6). Fasten the spare wheel (7) in the hole on the left (8).

Changing wheels

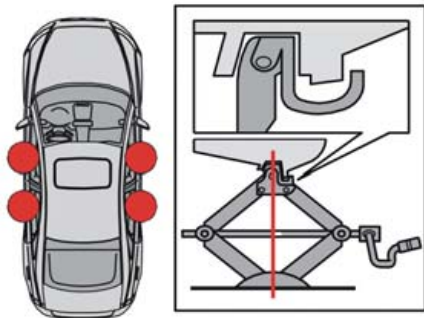


Removing wheels

Set up the warning triangle if a wheel must be replaced at a busy location. Make sure that the car and jack are on a firm horizontal surface.

- Take out the spare wheel, jack and wheel spanner, which are found under the carpet in the cargo area.
- Apply the parking brake and engage first gear, or position **P** if the car has an automatic gearbox.
- Place chocks in front of and behind the wheels which will remain on the ground. Use heavy wooden blocks or large stones.
- Cars with steel rims have removable wheel covers. Pry off the wheel cover with the end of the wheel spanner, or pull it off by hand.
- Loosen the wheel nuts $\frac{1}{2}$ –1 turn anticlockwise with the wheel spanner.
- Two jacking points are located on each side of the car. Wind down the jack's base so that it sits level on the ground. Check that the jack is seated correctly in the jacking point, as illustrated, and that the base is located directly under it.
- Jack up the car high enough that the wheel is clear of the ground. Remove the wheel nuts and lift off the wheel.

Changing wheels



WARNING!

Never crawl under the car when it is raised on the jack.

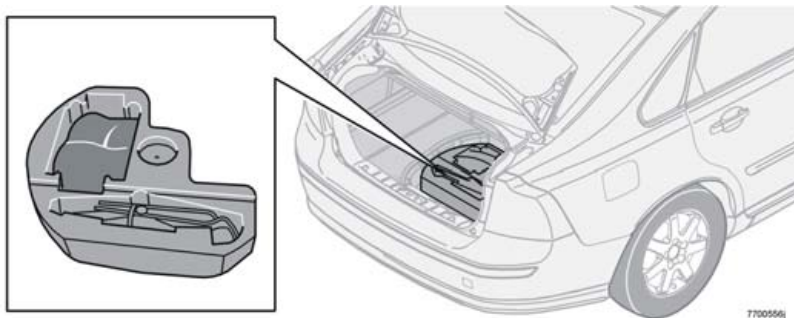
Passengers must leave the car when it is raised on the jack.

Ensure that passengers wait with the car - or preferably a crash barrier - between them and the road.

Fitting the wheel

- Clean the contact surfaces on the wheel and hub.
- Put on the wheel. Tighten the wheel nuts.
- Lower the car so that the wheel cannot rotate.
- Tighten the wheel nuts crosswise. It is important that the wheel nuts are tightened properly. Tighten to 90 Nm. Check the torque with a torque spanner.
- Put on the wheel cover (steel rim).

Emergency puncture repair



General

Cars which do not have a spare wheel are instead equipped with an emergency puncture repair kit. This kit can be used to both seal the puncture and to check and adjust the tyre pressure. The kit consists of an electric air compressor and an integrated canister with sealing liquid.

NOTE! The jack is an option on cars equipped with emergency puncture repair kit.

Emergency puncture repair kit

The emergency puncture repair kit¹ is only intended to work as a temporary repair so that the car can be driven a further 200 km (max.) or to the nearest tyre centre. The sealing fluid has the ability to effectively seal tyres which have punctures in the tread.

The sealing fluid canister should be replaced before its expiration date or after use of the puncture repair kit.

The expiration date is located on the front of the compressor, see the illustration on page 150.

See page 150 for information on canister replacement.

NOTE! The emergency puncture repair kit is only intended for sealing tyres with a puncture in the tread.

The emergency puncture repair kit has limited capacity to seal tyres which have punctures in the wall. Do not seal tyres with the emergency puncture repair kit if they have larger slits, cracks or similar damage.

1. Certain variants and markets

Emergency puncture repair

The emergency puncture repair kit with compressor and tools are found under the floor in the cargo area.

12 V sockets for the compressor are located by the centre console in the front, by the rear seat and in the cargo area. Choose the electrical socket that is nearest the punctured tyre.



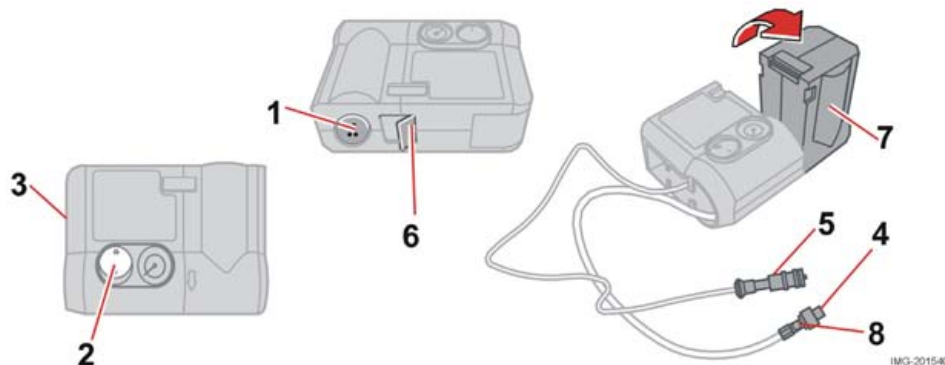
WARNING!

The sealing fluid may cause irritation if it comes into direct contact with skin. In the case of contact with skin, wash away the fluid with soap and water.

Taking out the emergency puncture repair kit

- Fold the rear edge of the floor mat forward.
- Lift up the emergency puncture repair kit.

Emergency puncture repair



Inflating tyres

Set up the warning triangle if a tyre must be inflated in an area close to traffic.

- Ensure that the orange switch (2) is in position **0** and take out the lead (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.
- Connect the lead (5) to one of the car's 12 V sockets.
- Start the engine. The car must be in a well-ventilated place.
- Start the compressor by flicking the switch (2) to position **I**.
- Pump up the tyre to the pressure specified on the tyre pressure label.
- Turn off the compressor, the switch (2) should be in position **0**. Detach the air hose and unplug the lead. Replace the valve's dust cap.
- Put the lead (5) and air hose (4) into the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo area.
- The compressor should not run for more than 10 minutes at a time. Let it cool afterwards as there is a risk of overheating.

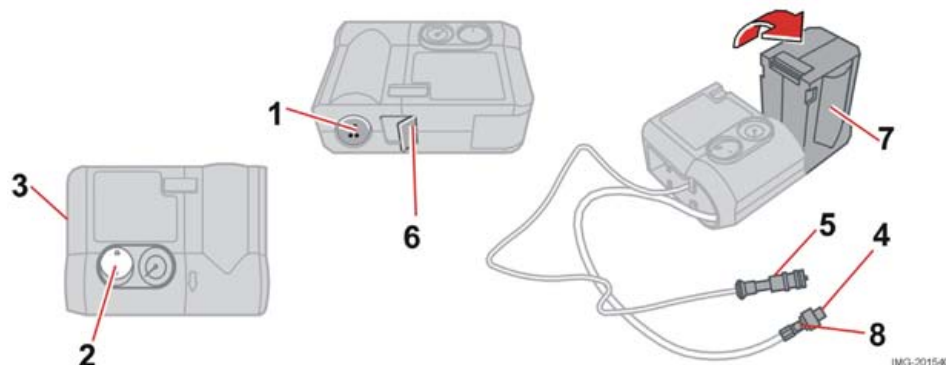
- Objects with a volume of up to 50 litres can be pumped up with the compressor.



WARNING!

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

Emergency puncture repair



Sealing punctured tyres

Set up the warning triangle if emergency tyre repairs must be carried out in an area where there is other traffic.

- Remove the decal (1) regarding the highest permitted speed from the emergency puncture repair kit and stick it on the steering wheel where it can be clearly seen by the driver.
- Ensure that the orange switch (2) is in position **0** and take out the lead (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.

- Connect the lead (5) to one of the car's 12 V sockets.
- Release the safety catch (6) and turn the orange-coloured part (7) 90 degrees to the vertical position, until a click is heard.
- Start the engine. The car must be in a well-ventilated place.



WARNING!

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

- Start the compressor by flicking the switch (2) to position **I**. There will be a

temporary pressure increase of max. 4 bar while the sealing fluid is pumped in. After approx. one minute, the pressure will drop and the gauge will indicate the correct tyre pressure.

- Pump the tyre to a pressure of between 1.8 bar and 3.5 bar. If the pressure does not reach 1.8 bar after ten minutes of pumping, the compressor should be turned off so it does not overheat.
- Undo the air hose (4) from the air valve and put the dust cap back on. Unplug the lead (5) from the electrical socket. Fold the orange-coloured part (7) back into its original position and secure the catch (6). Keep the emergency repair kit in a safe place in the car.

Emergency puncture repair

WARNING!

Never stand next to the tyre when the compressor is running. Be particularly observant of the tyre walls. If cracks, irregularities or other damage appears, turn off the compressor immediately. Under these circumstances your journey should not continue. Contact an authorised tyre centre.

- Immediately drive about 3 km, at a maximum speed of 80 km/h, to allow the sealing fluid to seal the tyre well.

WARNING!

You should not drive faster than 80 km/h after the emergency tyre repair kit has been used. The temporarily sealed tyre must be changed as soon as possible (maximum driving distance: 200 km).

- Check the tyre pressure again:

NOTE! Do not raise the orange-coloured part (7) when only the compressor is to be used for inflation.

- Connect the air hose (4) to the air valve on the tyre. Connect the lead (5) to the 12 V power point. Read the pressure on

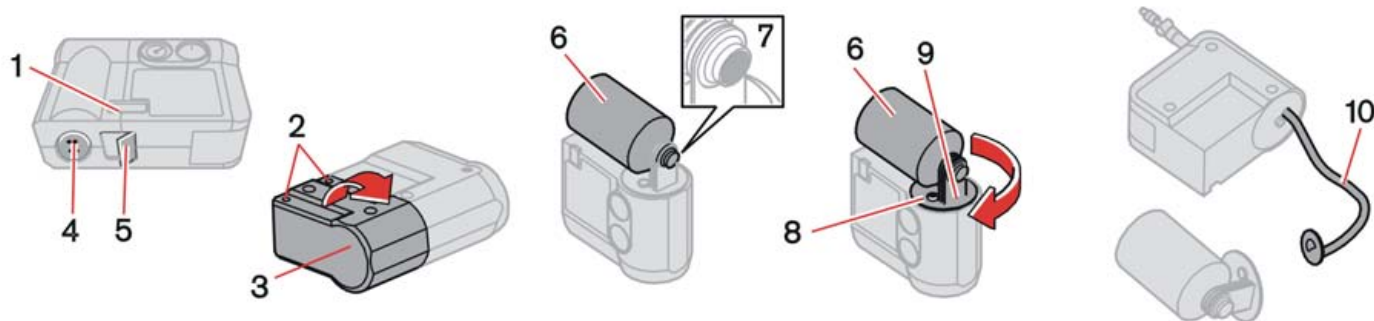
the compressor. If the tyre pressure is below 1.3 bar, the tyre has not been sufficiently well sealed. The journey should not be continued under these circumstances. Contact a tyre centre.

- If the tyre pressure is higher than 1.3 bar, the tyre should be pumped up to the pressure stated on the tyre pressure label, see page 140 for its location. Relieve pressure with the reduction valve (8) if the tyre pressure is too high.
- Turn off the compressor; the switch (2) should be in position **0**. Detach the air hose and unplug the lead. Replace the valve's dust cap.
- Put the lead (5) and air hose (4) into the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo area.

The compressor should not run for more than ten minutes at a time. Let it cool afterwards as there is a risk of overheating.

NOTE! The canister with sealant and hose should be replaced after use.

Emergency puncture repair



Changing the sealing fluid canister

The canister of sealing fluid should be changed before the best-before date has expired, see date label (1), or after the tyre has been sealed. After use, the canister (6) with holder (8) and air hose (10) should be changed.

This change can be carried out by an authorised Volvo workshop or following the instructions.

IMPORTANT!

Read the safety instructions on the bottom of the canister.



WARNING!

Ensure the compressor is not connected to the 12 V socket when the canister is changed.

Changing the canister before the best-before date has expired

- Undo the two screws (2) on the orange-coloured case (3).
- Remove the speed label (4) and date label (1), and open the safety catch (5). Loosen the case (3) and take it off.
- Unscrew and remove the canister (6).

- Check that the seal (7) on the new canister is not damaged. Screw the canister into place.
- Refit the case (3). Check that the case is correctly fitted. Screw it on with the screws (2).

- Affix the speed label (4) and new date label (1) to the tyre repair kit.

Treat the removed canister as hazardous waste.

Changing the canister and hose after use

- Undo the two screws (2) on the orange-coloured case (3).

Emergency puncture repair

- Remove the speed label (4) and date label (1), and open the safety catch (5). Loosen the case (3) and take it off.
- Push down the button (8) while turning the canister (6) and the holder (9) clockwise. Remove them.
- Pull out the air hose (10).
- Wipe off remaining sealing fluid with a rag or scrape it away if it is has already dried.
- Fit a new air hose (10). Check that it is fitted correctly.

Check that the seal (7) on the new canister is not damaged. Screw the holder (9) onto the canister (6) and turn it anticlockwise until a click is heard.

- Refit the case (3). Check that the case is correctly fitted. Screw it on with the screws (2).
- Affix the speed label (4) and new date label (1) to the tyre repair kit.

The empty canister and air hose can be treated as normal waste.

Car care

Cleaning	154
Touching up paintwork	156
Rustproofing	158

Cleaning

Washing the car

Wash the car as soon as it becomes dirty. Use car shampoo. Dirt and road salt can lead to corrosion.

- Do not park the car in direct sunlight. Washing a car with hot paintwork can cause permanent paintwork damage. Wash the car in a car wash with waste water separator.
- Thoroughly rinse dirt off the underbody of the car.
- Rinse the entire car to remove loose dirt. When using a pressure washer: Make sure that the nozzle of the pressure washer is not closer than 30 cm to the bodywork. Do not spray directly at the locks.
- Wash using a sponge, car shampoo and plenty of lukewarm water.
- If the dirt is difficult to dislodge, wash the car using a cold degreasing agent.
- Dry the car using a clean, soft chamois or a water scraper.
- Clean the wiper blades with a lukewarm soap solution or car shampoo.

Removing bird droppings

Wash bird droppings off the paintwork as soon as possible. Bird droppings contain chemicals that affect and discolour paintwork

very quickly. This discoloration can only be removed by a specialist.



WARNING!

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

Automatic car washes

An automatic car wash is a simple and quick way of washing the car, but it can never replace a proper handwashing. The brushes of an automatic car wash cannot reach everywhere.

IMPORTANT!

Washing by hand is gentler to the paintwork than an automatic car wash. The paintwork is also more sensitive when it is new. For this reason, handwashing is recommended during the first few months with a new car.



WARNING!

Always test the brakes after washing the car to ensure that moisture and corrosion do not attack the brake pads and reduce braking performance.

Press the brake pedal lightly from time to time if driving for long periods in rain or slush. This heats and dries the brake pads. You should also do this when you begin driving in extremely damp or cold weather.

Exterior plastic parts

A special cleaning agent, available from Volvo dealers, is recommended for cleaning exterior plastic parts. Never use strong stain removers.

Polishing and waxing

Polish and wax the car if the paintwork is dull or to give the paintwork extra protection.

The car does not need to be polished until it is at least one year old. However, the car can be waxed during this time. Do not polish or wax the car in direct sunlight.

Wash and dry the car thoroughly before you begin polishing or waxing. Clean off asphalt and tar stains using Volvo tar remover or white spirit. More stubborn marks can be removed using fine rubbing paste designed for car paintwork.

Polish first with a polish and then wax with liquid or solid wax. Follow the instructions on the packaging carefully. Many preparations contain both polish and wax.

Cleaning

Cleaning the interior

Treating spots on fabric upholstery

A special cleaning agent, available from Volvo dealers, is recommended for cleaning the fabric upholstery. Other chemicals can impair the fire retardant qualities of the upholstery.

IMPORTANT!

Sharp objects and Velcro may damage the fabric upholstery.

Treating spots on leather upholstery

A special cleaning agent, available from Volvo dealers, is recommended when cleaning leather upholstery. Treat the leather upholstery once or twice a year using Volvo's leather care kit. Never use strong solvents. Such products may damage fabric, vinyl and leather upholstery.

Treating spots on interior plastic parts and surfaces

A special cleaning agent, available from Volvo dealers, is recommended for cleaning interior plastic parts and surfaces. Do not scrape or rub stains. Never use strong stain removers.

Cleaning seatbelts

Use water and a synthetic detergent. A special textile cleaning agent is available from your Volvo dealer. Make sure the seatbelt is dry before allowing it to retract.

Touching up paintwork

Paintwork

Paint is an important part of the car's rustproofing and should therefore be checked regularly. To avoid the onset of rust, damaged paintwork must be rectified immediately. The most common types of paintwork damage are stone chips, scratches, and marks on the edges of wings and doors.

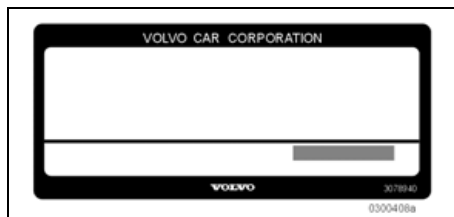
Colour code

It is important that the correct colour is used. The colour code number is shown on the data plate, see page 208.

VOLVOCARCORP.MADEIN		
	kg	1
	kg	2
1-	kg	3
2-	kg	4

0300372a

Variant 1



Variant 2



Only for China



Stone chips and scratches

Before touching up paintwork, the car must be clean and dry and at a temperature above 15 °C.

Materials

- Primer in a can
- Paint in a can or touch-up pen
- Brush
- Masking tape.

Minor stone chips and scratches

If the stone chip has not penetrated to the bare metal and there is an undamaged colour coat, you can paint straight after cleaning the damaged area.

Touching up paintwork

If the stone chip has penetrated to the bare metal

- Stick a piece of masking tape over the damaged surface. Then remove the tape to remove any loose paint.
- Stir the primer well and apply using a fine brush or matchstick. Apply paint using a brush once the primer is dry.
- For scratches, proceed as above, but mask around the damaged area to protect the undamaged paintwork.
- After a few days, polish the touched-up areas. Use a soft rag and a small amount of lapping paste.

Rustproofing

Inspection and maintenance

Your car received a thorough and complete rustproofing at the factory. Parts of the body are made of galvanised sheet metal. The underbody is protected by a wear-resistant anti-corrosion compound. And, a thin, penetrating rustproofing fluid was sprayed into the members, cavities and closed sections.

Maintain the car's rustproofing.

- Keep the car clean. Hose down the underbody. If using a pressure washer, keep the nozzle at least 30 cm from the painted surfaces.
- Regularly check and touch-up the rustproofing treatment as necessary.

The car's rustproofing does not normally require treatment for approximately 12 years. After that time, it should be treated at three-year intervals. If the car needs further treatment, please contact an authorised Volvo workshop.

Maintenance and service

Volvo service	160
Self-maintenance	161
Bonnet and engine compartment	162
Diesel	163
Oils and fluids	164
Wiper blades	168
Battery	169
Replacing bulbs	171
Fuses	177

Volvo service

Volvo service programme

Before the car left the factory, it was thoroughly test driven. It was checked again in accordance with Volvo Car Corporation regulations before it was handed over to you.

To keep your Volvo as safe and reliable as possible, follow the Volvo service programme specified in the Service and Warranty Booklet. Have an authorised Volvo workshop carry out service and maintenance work.

Volvo workshops have the personnel, special tools and service literature to guarantee the highest quality of service.

IMPORTANT!

For the Volvo warranty to apply, check and follow the instructions in the Service and Warranty Booklet.

Special service measures

Certain service measures which affect the car's electrical system can only be performed using electronic equipment specially developed for your car. Always contact an authorised Volvo workshop before beginning or performing service work that affects the electrical system.

Installing accessories

The incorrect connection and installation of accessories can negatively affect the car's electrical system. Certain accessories only function when the appropriate software has been programmed into the car's electrical system. Always contact an authorised Volvo workshop before installing accessories which are connected to or affect the electrical system.

Recording vehicle data

One or more of the computers in your Volvo are capable of recording detailed information. This information is intended for use in research to enhance safety and for diagnosing faults in some of the in-car systems. The data may include details regarding seatbelt use by the driver and passengers, the functions of various vehicle systems and modules, and status information about the engine, throttle, steering, brakes and other systems. This data can also include details of the way the car is driven. This type of information can include, without being limited to, specific details such as vehicle speed, the use of the brake and accelerator pedals and steering wheel position. This latter type of data can be stored for a limited period while the car is being driven and

subsequently during a collision or a near-collision. Volvo Car Corporation will not disclose the stored information without consent. However, Volvo Car Corporation may be forced to disclose the information due to national legislation. Volvo Car Corporation and its authorised workshops may also read and use the information.

Adverse driving conditions

Check the oil level more frequently for long journeys:

- Towing a caravan or trailer
- In mountainous regions
- At high speeds
- In temperatures colder than -30°C or hotter than $+40^{\circ}\text{C}$.

Also check the oil level more often if the car is often driven short distances (less than 10 km) when temperatures are low (below $+5^{\circ}\text{C}$).

This can produce abnormally high oil temperature or oil consumption.

Self-maintenance

Before starting work on the car

Battery

- Check that the battery cables are correctly connected and tightened.
- Never disconnect the battery when the engine is running (e.g. if replacing the battery).
- Never use a quick charger to charge the battery. The battery cables must be disconnected when charging the battery.

The battery contains acid that is both corrosive and toxic. Handle the battery in an environmentally-suitable way. Let your Volvo dealer assist you.



WARNING!

High voltage output from the ignition system. The voltage in the ignition system is dangerous. The ignition must therefore always be switched off for work in the engine compartment.

Do not touch the spark plugs or ignition coils when the ignition is on or the engine is hot.

Check regularly

Check the following at regular intervals, for example, when refuelling:

- Coolant – The level must be between the MIN and MAX marks on the expansion tank.
- Engine oil – The level must be between the MIN and MAX marks.
- Power steering fluid – The level must be between the MIN and MAX marks.
- Washer fluid – The reservoir should be well filled. Use washer antifreeze at temperatures around freezing.

Brake and clutch fluid – The level must be between the MIN and MAX marks.

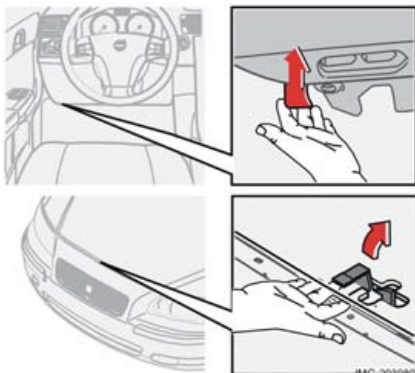


WARNING!

Bear in mind that the radiator fan may start automatically some time after the engine has been switched off.

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

Bonnet and engine compartment



Opening the bonnet

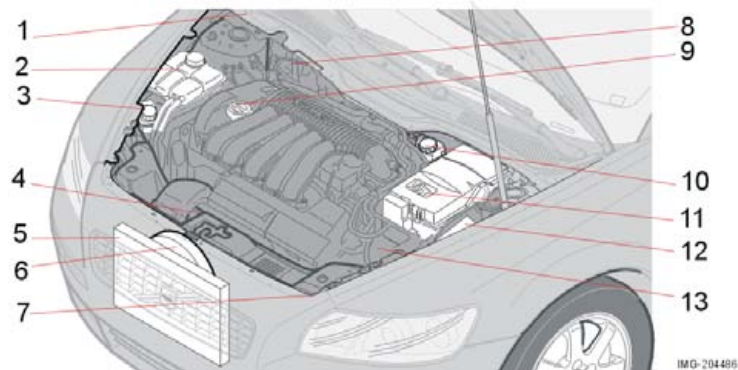
To open the bonnet:

- Pull the handle on the far left under the dashboard. You will hear when the catch releases.
- Insert your hand under the centre of the front edge of the bonnet and press the safety catch to the right.
- Open the bonnet.



WARNING!

Check that the bonnet locks properly when closed.



Engine compartment

1. Washer fluid reservoir (4 cyl.)
2. Coolant expansion tank
3. Power steering fluid reservoir
4. Engine oil dipstick¹
5. Radiator
6. Radiator fan
7. Washer fluid reservoir (5 cyl.)
8. Brake and clutch fluid reservoir (right-hand drive)
9. Filler opening for engine oil¹
10. Brake and clutch fluid reservoir (left-hand drive)
11. Battery

12. Relay and fuse box

13. Air filter¹

1. Dependent on engine variant

Diesel

Fuel system

Diesel engines are sensitive to contaminants. Only use diesel from a well-known oil company. Never fill up with diesel if the quality is dubious. The large oil companies also produce a special winter-grade diesel for temperatures around freezing. This fuel is less viscous at low temperatures and reduces the risk of wax forming in the fuel system.

The risk of condensation in the fuel tank is reduced if the tank is kept well filled. When refuelling, check that the area around the fuel filler pipe is clean. Avoid spilling fuel onto the paintwork. Wash off any spillage with detergent and water.

Empty tank

No special procedures are required if the tank runs dry.

RME (Rape Methyl Ester)

A maximum of 5 % RME may be mixed with the diesel.

Draining condensation from the fuel filter

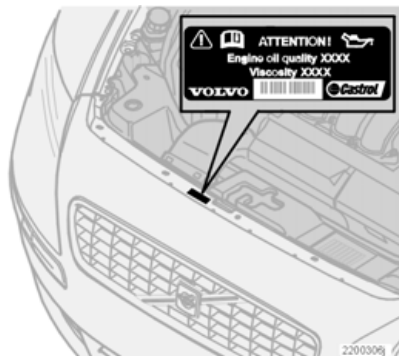
The fuel filter separates condensation from the fuel. Condensation can disrupt engine operation.

The fuel filter must be drained at the intervals specified in the Service and Warranty Booklet or if you suspect that the car has been filled with contaminated fuel.

IMPORTANT!

There is a risk of engine damage if the RME concentration is greater than 5 %.

Oils and fluids

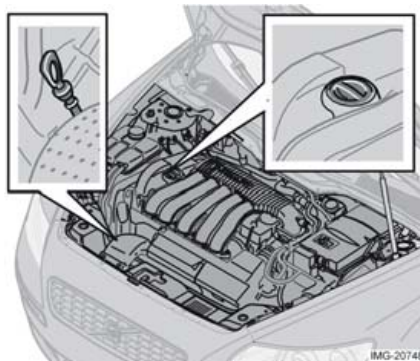


Engine compartment decal for oil grade

IMPORTANT!

Always use oil of the prescribed grade, see the engine compartment decal. Check the oil level frequently and change the oil regularly. The engine will be damaged if lower grade oil is used or if the car is driven with the oil level too low.

Using oil of a higher than specified grade is permitted. If the car is driven in adverse conditions, Volvo recommends using an oil of a higher grade than that specified on the decal. See page 212.



Dipstick, petrol engines

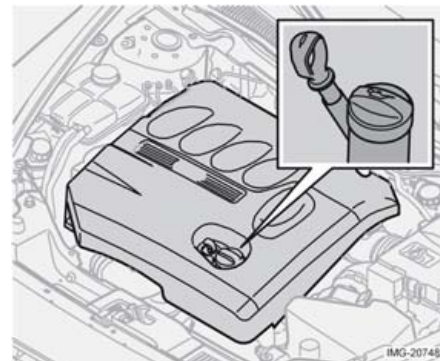
Volvo recommends  oil products.

Checking and changing the engine oil and oil filter

Change the oil and oil filter in accordance with the intervals specified in the Service and Warranty Booklet.

IMPORTANT!

When filling oil to top up a low oil level, the oil being filled must be of the same grade and viscosity as the oil in the engine.

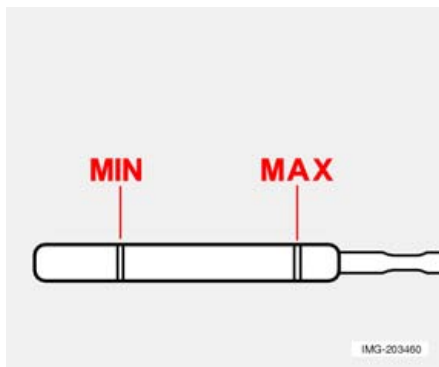


Dipstick, diesel engines

Checking the oil level in a new car is especially important before the first scheduled oil change. The Service and Warranty Booklet specifies the odometer readings for oil changes.

Volvo recommends checking the oil level every 2 500 km. The most accurate measurements are made on a cold engine before starting. The measurement will be inaccurate if taken immediately after the engine is switched off. The dipstick will indicate that the level is too low because the oil has not had time to flow down into the oil sump.

Oils and fluids



The oil level must be within the area marked on the dipstick

Checking the oil in a cold engine:

- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the MIN and MAX marks.
- If the level is close to the MIN mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the MAX than the MIN mark on the dipstick. See page 213-214 for capacities.

Checking the oil in a warm engine:

- Park the car on a level surface, switch off the engine and wait 10-15 minutes to allow the oil time to run back to the sump.

- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the MIN and MAX marks.
- If the level is close to the MIN mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the MAX than the MIN mark on the dipstick. See page 213-214 for capacities.

IMPORTANT!

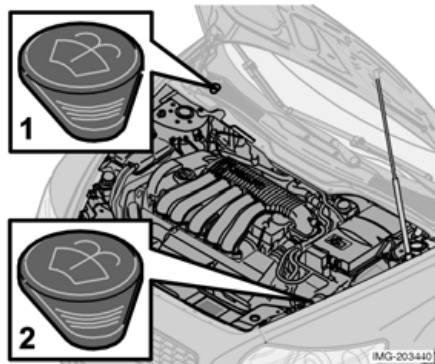
Never fill above the MAX mark. Oil consumption may increase if too much oil is poured into the engine.



WARNING!

Do not spill oil onto the hot exhaust manifold due to the risk of fire.

Oils and fluids



Location of washer fluid reservoir¹

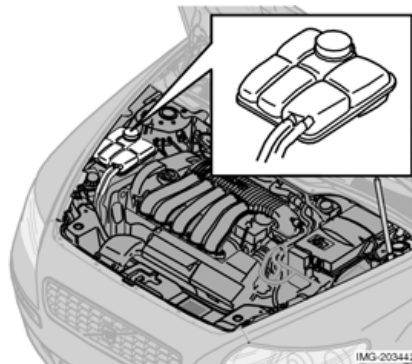
Washer fluid, topping up

The windscreen and headlamp washers share a common reservoir.

1. Filler cap on 4 cylinder engines and diesel.
2. Filler cap on 5 cylinder engines.

Add washer antifreeze during the winter so that the fluid does not freeze in the pump, reservoir and hoses. See the capacities on page 217.

NOTE! Mix the washer antifreeze and water before filling the reservoir.



Checking and topping up the coolant

When topping up the coolant, follow the instructions on the packaging. It is important that the mixture of coolant concentrate and water is correct for the prevailing weather conditions. Never top up with water only. The risk of freezing increases with both too little and too much coolant concentrate.

See capacities on page 216.

Check the coolant regularly

The level should lie between the MIN and MAX marks on the expansion tank. If the system is not filled sufficiently, high local temperatures could occur, causing a risk of

IMPORTANT!

Always use coolant with anti-corrosion agent as recommended by Volvo. New cars are filled with coolant that can withstand temperatures down to approximately -35°C .

damage (cracks) to the cylinder head. Top up the coolant when the level falls to the MIN mark.

NOTE! The engine must only be run with a well-filled cooling system. High temperatures can occur, causing a risk of damage (cracks) to the cylinder head.

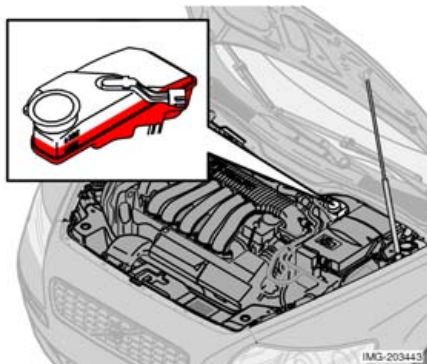


WARNING!

The coolant may be very hot. If the coolant requires topping up when the engine is at operating temperature, unscrew the expansion tank cap slowly to gently release the overpressure.

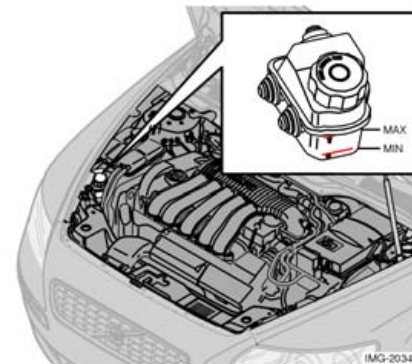
1. Dependent on engine variant.

Oils and fluids



WARNING!

If the brake fluid is under the MIN level in the brake fluid reservoir, do not drive further before topping up the brake fluid. The reason for the loss of brake fluid must be investigated.



Checking and topping up the brake and clutch fluid

The brake and clutch fluid have a common reservoir¹. The fluid level must be between the MIN and MAX marks. Check the level regularly. Change the brake fluid every other year or at every other regular service.

See the capacities and recommended brake fluid grade on page 217.

The fluid should be changed annually on cars driven in conditions requiring hard, frequent braking, such as driving in mountains or tropical climates with high humidity.

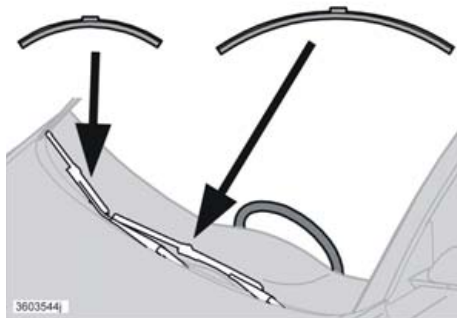
1. Location dependent on whether car is left or right-hand drive.

Checking and topping up the power steering fluid

Check the level at every service. The fluid does not require changing. The fluid level must be between the MIN and MAX marks. See the capacities and recommended oil grade on page 217.

If a fault should arise in the power steering system or if the car is without power and must be towed, it can still be steered. However the steering will be much heavier than normal and it will require more effort to turn the wheel.

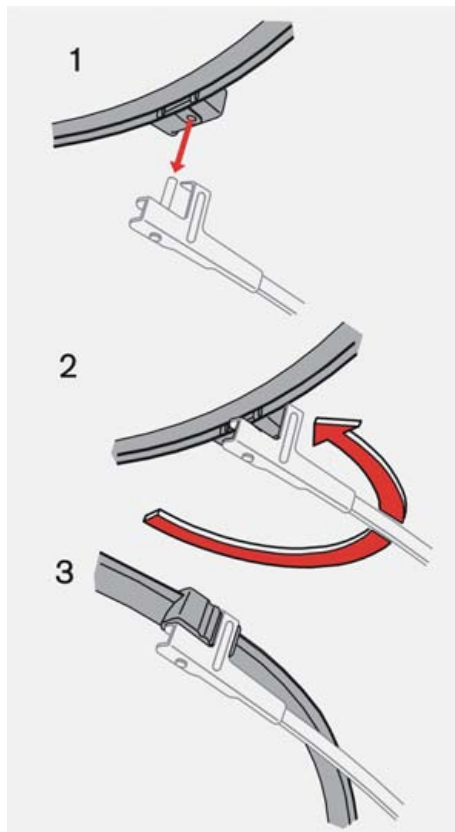
Wiper blades



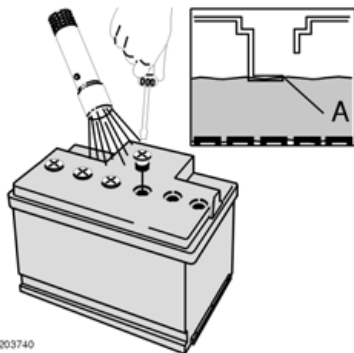
Changing the wiper blades

- Fold out the wiper arm and fold out the wiper blade at 90 degrees in relation to the wiper arm.
- Pull the wiper blade from the shaft, directly to the side.
- Insert the new wiper blade (1) at 90 degrees in relation to the wiper arm.
- Position the wiper blade (2) under the curved metal plate (3) and lower the wiper arm.

NOTE! The wiper blades are different lengths. The blade on the driver's side is longer than the blade on the passenger side.



Battery



- Regularly check that the battery electrolyte level is correct (A).
- Check all cells. Use a screwdriver to remove the caps. Each cell has its own maximum level mark.
- If necessary, top up with distilled water to the battery's maximum mark.
- Tighten the caps properly.

NOTE! The life of the battery is shortened if it becomes discharged repeatedly.

Symbols on the battery

These symbols displayed on the battery.



Use protective goggles.



Further information in the owner's manual.



Store the battery out of the reach of children.



The battery contains corrosive acid.



Avoid sparks and naked flames.



Risk of explosion.

Battery care

The service life and function of the battery is influenced by factors such as the number of starts, discharging, driving style, driving conditions and climatic conditions.

NOTE! Never fill above the maximum mark (A).

IMPORTANT!

Always use distilled or deionised water (battery water).

For the battery to function satisfactorily, consider the following:

Battery

Changing the battery

Removing the battery:

- Switch off the ignition and remove the key.
- Unscrew the cover over the battery.
- Wait at least 5 minutes before touching any electrical terminals. This allows time for the information in the car's electrical system to be stored in the control modules.
- Remove the lid and unscrew the front wall of the battery box using a screwdriver.
- Disconnect the negative battery lead.
- Release the clamp securing the battery.
- Disconnect the positive battery lead.
- Remove the battery.

Fitting the battery:

- Fit the battery into position.
- Connect the positive lead.
- Fit the clamp securing the battery.
- Connect the negative lead.
- Refit the front wall of the battery box and the lid.
- Refit the cover over the battery.



WARNING!

Batteries can generate oxyhydrogen gas, which is highly explosive. A spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode. The battery also contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical advice immediately.

Replacing bulbs

General

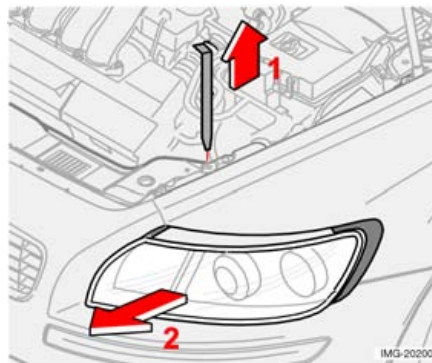
All bulb specifications are given on page 222.

The following list contains bulbs and point-source lamps that are specialised or unsuitable for changing except at a workshop:

- General interior lighting in the roof.
- Reading lamps.
- Glovebox lighting.
- Direction indicators in the door mirrors.
- Approach lighting in the door mirrors.
- High-level brake light.

IMPORTANT!

Never touch the bulbs glass with your fingers. Grease and oils from your fingers are vaporised by the heat, coating and damaging the reflector.



Changing front bulbs

All front bulbs (except for fog lamps) are changed by first removing the lamp housing from the engine compartment.



WARNING!

On cars with Bi-Xenon headlamps, all work on the lights should be carried out at an authorised Volvo workshop. Bi-Xenon headlamps must be handled with extreme care due to the high-voltage unit.

Removing the lamp housing:

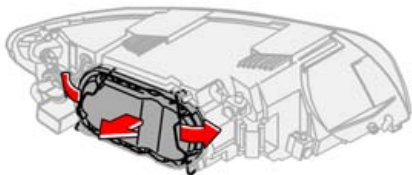
- Remove the ignition key and turn the light switch to position **0**.
- Withdraw the lamp housing's locking pin (1).
- Pull the lamp housing to the side and then forward (2).
- Unplug the connector.
- Lift out the lamp housing and place it on a soft surface to avoid scratching the lens.

Fitting the lamp housing:

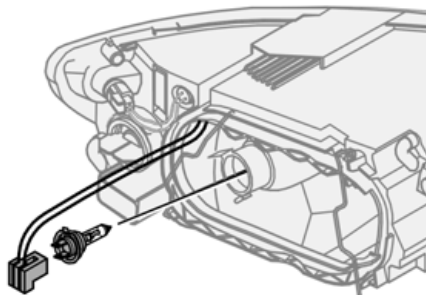
- Plug in the connector.
- Refit the lamp housing and fit the locking pin. Check that the pin is correctly inserted.
- Check the lighting.

The lamp housing must be plugged in and secured in place before the lighting is turned on or the ignition key inserted into the ignition switch.

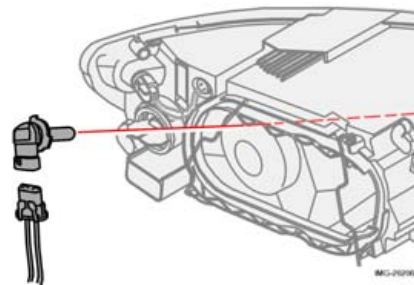
Replacing bulbs



IMG-202080



IMG-202081



IMG-202085

Dipped beam

Removing the cover and bulb:

- Remove the entire lamp housing.
- Bend aside the catches and remove the cover.
- Unplug the connector from the bulb.
- Release the spring clip that secures the bulb. First, press it to the left to release it, then out and down.
- Pull out the bulb.
- Refit the lamp housing.

Fitting a new bulb:

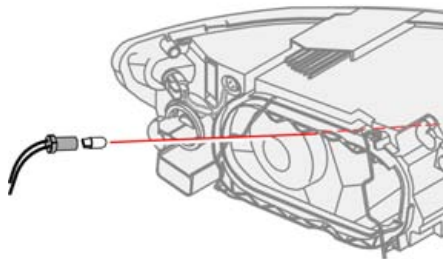
- Fit the new bulb. It can only be fitted in one position.

- Press the spring clip up and then slightly to the right so that it clicks into place.
- Press the connector back on.
- Refit the plastic cover.
- Refit the lamp housing.

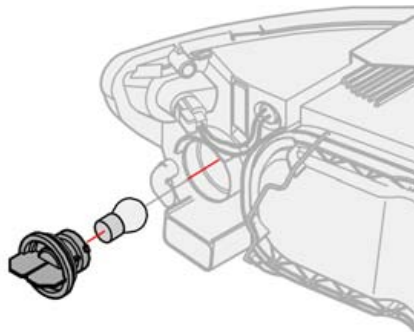
Main beam

- Remove the entire lamp housing.
- Left-hand headlamp:
Turn the bulb holder anticlockwise.
- Right-hand headlamp:
Turn the bulb holder clockwise.
- Withdraw the bulb holder and change the bulb.
- Refit the bulb holder. It can only be fitted in one way.
- Refit the lamp housing.

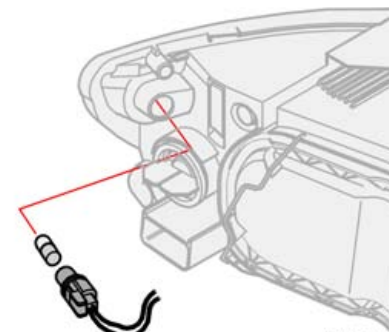
Replacing bulbs



IMG-202085



IMG-202088



IMG-202090

Position/parking lamps

- Pull out the bulb holder with a pair of pliers. Do not pull out the bulb holder by pulling the electrical cable.
- Replace the bulb.
- Press the bulb holder back into place. It can only be fitted in one way.

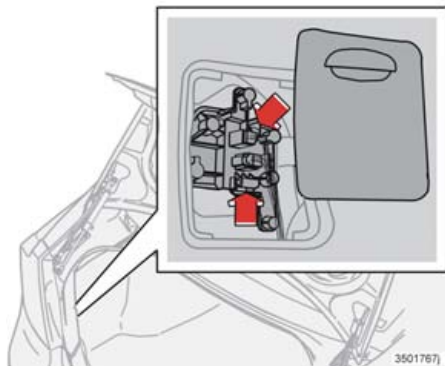
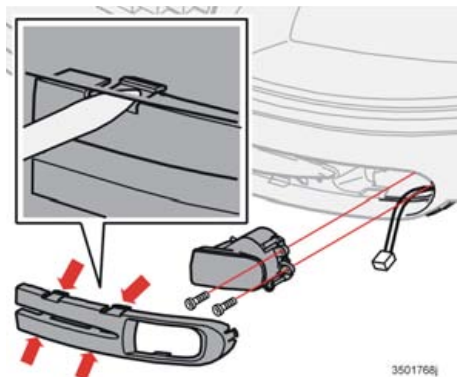
Direction indicators

- Twist the bulb holder anticlockwise and remove it.
- To remove the bulb from the bulb holder, press the bulb in and turn it anticlockwise.
- Fit a new bulb and refit the bulb holder into the lamp housing.

Side marker lamps

- Twist the bulb holder anticlockwise and withdraw it. Change the bulb.
- Refit the bulb holder. It can only be fitted in one way.

Replacing bulbs



- Press the bulb holder into place and refit the cover.

Fog lamps

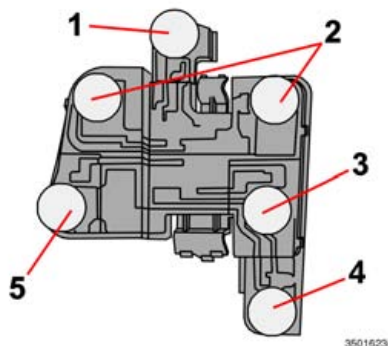
- Switch off all lights and turn the ignition key to position **0**.
- Remove the panel from around the lamp housing.
- Remove the two Torx screws securing the lamp housing and take out the lamp housing.
- Unplug the connector from the bulb.
- Turn the bulb anticlockwise and pull it out.
- Fit the new bulb and turn it clockwise.
- Plug in the connector to the bulb.
- Secure the lamp housing with the screws and press the panel back into place.

Removing the bulb holder

All bulbs in the rear lamp cluster can be changed from inside the cargo area.

- Switch off all lights and turn the ignition key to position **0**.
- Remove the covers in the left/right-hand panel to access the bulbs.
- These bulbs are located in separate bulb holders.
- Unplug the connector from the bulb holder.
- Squeeze together the catches and remove the bulb holder.
- Replace the bulb.
- Plug in the connector.

Replacing bulbs

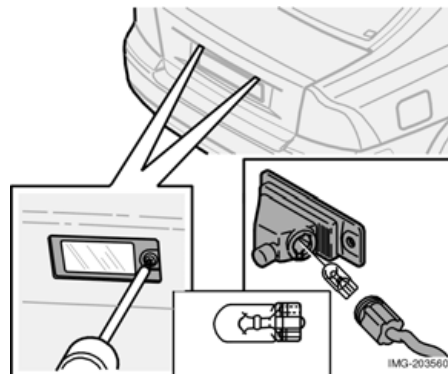


Bulb holder

Location of the bulbs in the rear lamp cluster

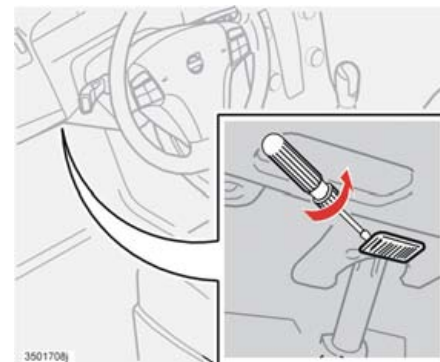
1. Brake light
2. Position/parking lamps
3. Direction indicator
4. Rear fog lamp (one side)
5. Reversing lamp

NOTE! If the error message "BULB FAILURE"/"CHECK STOP LAMP" remains after a faulty bulb has been replaced, then an authorised Volvo workshop needs to be consulted to rectify the fault.



Number plate lighting

- Switch off all lights and turn the ignition key to position 0.
- Remove the screw with a screwdriver.
- Carefully detach the entire lamp housing and withdraw it. Turn the connector anticlockwise and pull out the bulb.
- Replace the bulb.
- Insert the connector and turn clockwise.
- Refit the entire lamp housing and screw it into place.

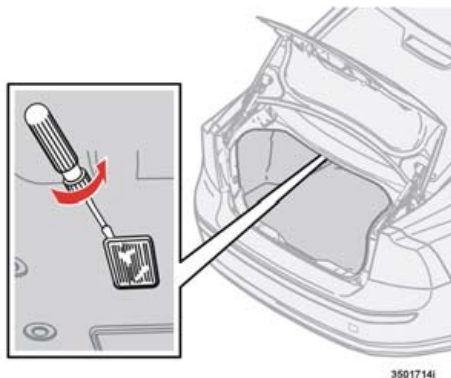


Courtesy lighting

There is courtesy lighting under the dashboard on the driver and passenger sides.

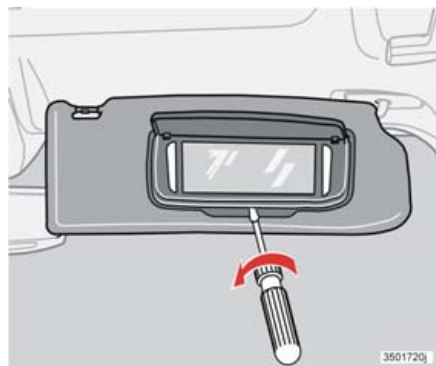
- Insert a screwdriver and gently turn so that the lens detaches.
- Remove the blown bulb.
- Fit a new bulb.
- Refit the lens.

Replacing bulbs



Cargo area

- Insert a screwdriver and gently turn so that the lamp housing comes loose.
- Remove the blown bulb.
- Fit a new bulb.



Vanity mirror lighting

Removing the mirror glass:

- Insert a screwdriver underneath the lower edge, in the centre. Turn it and carefully prise up the lug on the edge.
- Insert the screwdriver under the edge on both the left and right side (at the black rubber points) and carefully prise so that the lens releases at the lower edge.
- Carefully detach and lift aside the entire mirror glass and cover.
- Remove the blown bulb and replace it with a new one.

Fitting the mirror glass:

- First, press the three lugs at top edge of mirror glass back into position.
- Then press the three lower lugs back into position.

Fuses

General

All electrical functions and components are fused to protect the car's electrical system from damage by short circuiting and overloading.

The fuses are in two different locations in the car:

- Relay/Fuse box in the engine compartment.
- Relay/fuse box in the passenger compartment.

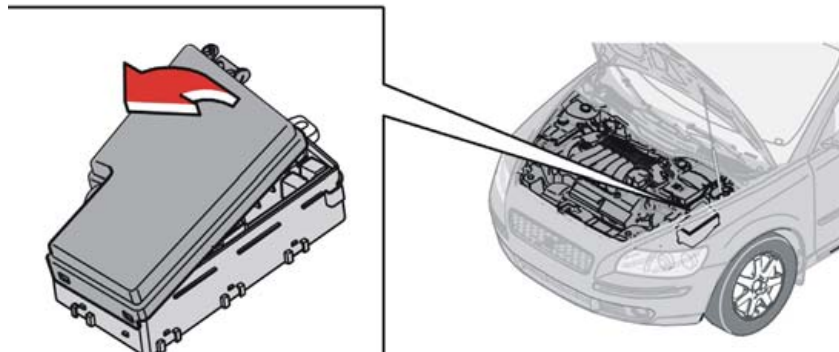
Changing

If an electrical component or function does not work, it may be because the component's fuse was temporarily overloaded and blew.

- Look in the fuse diagram to locate the fuse.
- Pull out the fuse and check from the side to see whether the curved wire has blown.
- If this is the case, replace it with a new fuse of the same colour and amperage.

Each fuse box has space for several spare fuses. If the same fuse blows repeatedly it means that there is a fault in the component. Contact an authorised Volvo workshop to have the system checked.

Fuses



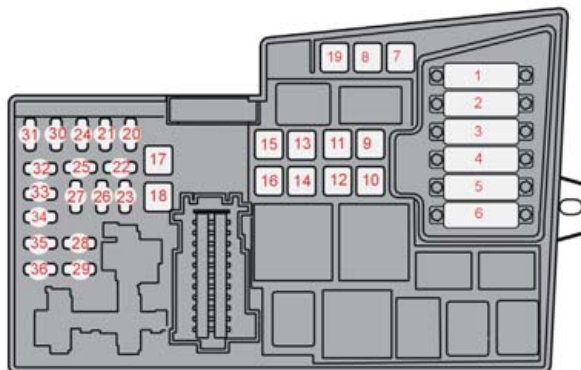
Relay/fuse box in the engine compartment

The fuse box has 36 fuse positions. Be sure to replace a blown fuse with a new fuse of the same colour and amperage.

- 19–36 are of the "Mini Fuse" type.
- Fuses 7–18 are of the "JCASE" type and should be replaced by an authorised Volvo workshop.
- Fuses 1–6 are of the "Midi Fuse" type and must only be replaced by an authorised Volvo workshop.

On the inside of the cover are tweezers to assist removing and fitting fuses.

Fuses



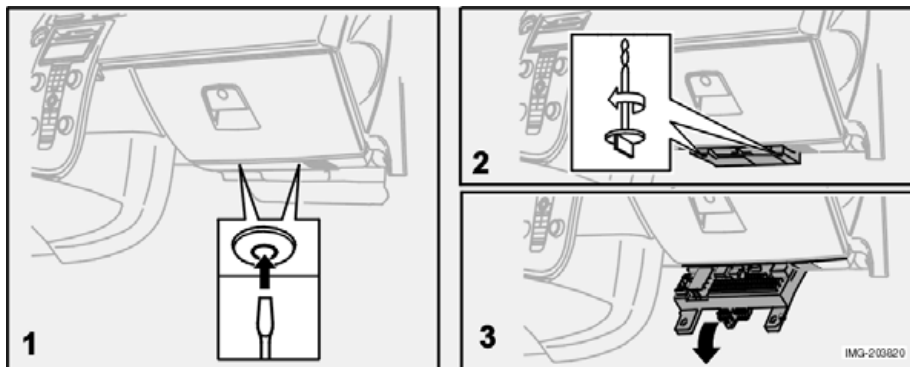
IMG-203801

1. Radiator fan.....	50 A	15. Reserve.....	-
2. Power steering (not 1.6 l engine).....	80 A	16. Supply to infotainment system	30 A
3. Supply to passenger compartment fuse box.....	60 A	17. Windscreen wipers	30 A
4. Supply to passenger compartment fuse box.....	60 A	18. Supply to passenger compartment fuse box	40 A
5. Climate control element, additional heater (PTC) (option)	80 A	19. Reserve.....	-
6. Glow plugs (diesel)	60 A	20. Horn	15 A
7. ABS pump.....	30 A	21. Fuel-driven additional heater, passenger compartment heater	20 A
8. ABS valves	20 A	22. Reserve	-
9. Engine functions.....	30 A	23. Engine control module (ECM, 5 cyl.)/ Transmission control module (TCM)	10 A
10. Ventilation fan.....	40 A	24. Electrically heated fuel filter, PTC element oil trap (5-cyl. diesel)	20 A
11. Headlamp washers.....	20 A	25. Reserve	-
12. Supply to heated rear window	30 A	26. Ignition switch.....	15 A
13. Starter motor relay.....	30 A	27. AC compressor	10 A
14. Trailer wiring	40 A		

Fuses

- 28. Reserve -
- 29. Fog lamp, front, 15 A
- 30. Engine control module (ECM, 4 cyl.) 3 A
- 31. Voltage regulator, alternator 4 cyl. 10 A
- 32. Injectors (5-cyl. petrol), lambda-sond (4-cyl. petrol),
charge air cooler (4-cyl. diesel), mass air flow (MAF) sensor
and turbo control (5-cyl. diesel) 10 A
- 33. Lambda-sond and vacuum pump (5-cyl. petrol),
engine control module (ECM) (5-cyl. diesel) 20 A
- 34. Ignition coils (petrol), injectors (1.6 l petrol),
fuel pump (4-cyl. diesel),
pressure switch, climate control (5-cyl.),
glow plugs and EGR emission control (5-cyl. diesel) 10 A
- 35. Engine sensors for valves, relay coil air conditioning,
PTC element, oil trap (5-cyl. petrol), engine control
module (ECM) (5-cyl. diesel), canister (petrol),
injectors (1.8/2.0 l petrol),
mass air flow (MAF) sensor (5-cyl. petrol, 4-cyl. diesel),
turbo control (4-cyl. diesel),
pressure switch, power steering (1.6 l petrol),
EGR emission control (4-cyl. diesel) 15 A
- 36. Engine control module (ECM) (not 5-cyl. diesel),
accelerator pedal position sensor, l
lambda-sond (5-cyl. diesel) 10 A

Fuses



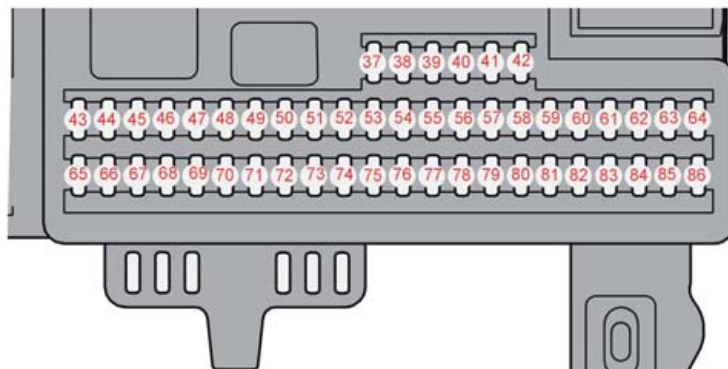
Relay/fuse box in the passenger compartment

The fuse box has 50 fuse positions. The fuses are located under the glovebox. The box also provides space for several spare fuses. Tools for fuse replacement are located in the relay/fuse box in the engine compartment, see page 178.

Changing fuses:

- Remove the trim concealing the fuse box by pressing in the pin in the centre of the clips (1) about one cm and then withdrawing the clips.
- Turn the two wing screws (that secure the fuse box) (2) anticlockwise and undo them.
- Lower the fuse box (3) half way. Pull it towards the seat until it stops. Lower it completely. The fuse box can be unhooked.
- Close the fuse box in the reverse order.
- Remove the pins from the centre of the clips. Fit the trim and the clips. Reinsert the pins to expand the clips and secure the trim.

Fuses



IMG-20380

37. Reserve	-	51. Parking assistance, AWD, additional heater for passenger compartment, Bi-Xenon (option)	10 A
38. Reserve	-	52. Transmission control module (TCM), ABS system	5 A
39. Reserve	-	53. Power steering	10 A
40. Reserve	-	54. Engine control module (ECM) (5-cyl. turbo, 5-cyl. diesel) .	10 A
41. Reserve	-	55. Remote control module, Keyless control module.....	20 A
42. Reserve	-	56. Siren control module.....	10 A
43. Telephone, audio, RTI (option)	15 A	57. Data link connector	15 A
44. SRS system	10 A	58. Main beam (right), auxiliary lamps relay coil	7,5 A
45. Electrical socket	15 A	59. Main beam, left	7,5 A
46. Passenger compartment, glovebox and courtesy lighting.....	5 A	60. Seat heating (driver's side)	15 A
47. Interior lighting	5 A	61. Seat heating (passenger side)	15 A
48. Washer	15 A	62. Sunroof	20 A
49. SRS system	10 A	63. Supply to rear right door.....	20 A
50. Reserve	-	64. Audio system, RTI (option)	5 A

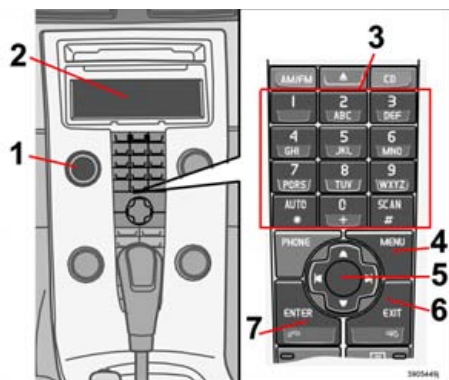
Fuses

65. Infotainment system	5 A
66. Infotainment control module (ICM), climate control.....	10 A
67. Reserve	-
68. Cruise control	5 A
69. Climate control, rain sensor.....	5 A
70. Reserve	-
71. Reserve	-
72. Reserve	-
73. Sunroof, overhead console (OHC) rear seatbelt reminder, autodim mirror	5 A
74. Fuel pump relay	15 A
75. Reserve	-
76. Reserve	-
77. Electrical socket in cargo area, accessory electronic module (AEM)	15 A
78. Reserve	-
79. Reversing lamp.....	5 A
80. Reserve	-
81. Supply to rear left door.....	20 A
82. Supply to front right door.....	25 A
83. Supply to front left door	25 A
84. Power passenger seat	25 A
85. Power driver's seat	25 A
86. Interior lighting, cargo area lighting, power seats	5 A

Infotainment system

General	186
Audio functions	187
Radio functions	189
CD and MD functions	193
Menu structure - audio system	195
Telephone functions (option)	196
Menu structure - telephone	203

General



Infotainment system

Infotainment is a system that integrates the audio system and the telephone¹. The infotainment system can be easily operated using the control panel or the steering wheel keypad¹, see page 52. The display (2) shows messages and information on the current function.

Audio system

On/Off

POWER (1) switches the audio system on or off. If the audio system is active when the ignition key is turned to position **0** then it continues to be active until the key is

removed from the ignition switch. The audio system is started automatically the next time the key is turned to position **I**.

Menus

Some infotainment system functions are controlled via a menu system. The current menu level is shown at the top right of the display. Menu options are shown in the middle of the display.

- MENU (4) leads to menu system.
- Up/down with the navigation button (5) moves between menu options.
- ENTER (7) selects or activates/deactivates a menu option.
- EXIT (6) goes back one step in the menu structure. A long press on EXIT will exit the menu system.

Shortcuts

Menu options are numbered and can also be selected directly with the keypad (3).

Equipment

The audio system can be equipped with different options and different versions. There are three audio system versions: Performance, High Performance and Premium Sound. FM and AM radio with RDS and CD player is however included in each version.

Dolby Surround Pro Logic II

Dolby Surround Pro Logic II² distributes the two stereo audio channels to left, centre, right and rear speakers. This provides a more realistic sound quality than that provided by standard two-channel stereo.



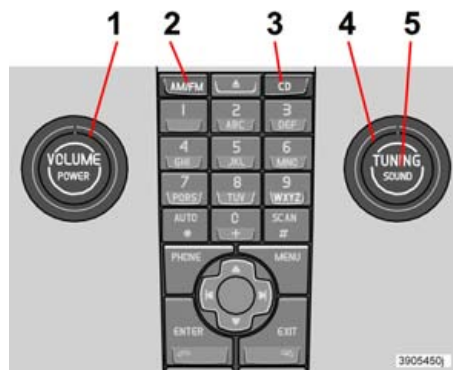
Dolby Surround Pro Logic II and the Dolby icon are trademarks of Dolby Laboratories Licensing Corporation.

The Dolby Surround Pro Logic II System is manufactured under license from Dolby Laboratories Licensing Corporation.

1. Option.

2. Premium Sound.

Audio functions



Audio controls

1. VOLUME – Knob
2. AM/FM – Audio source selection
3. CD/MD – Audio source selection
4. TUNING – Knob
5. SOUND – Button

Volume

Use VOLUME (1) or the steering wheel keypad to regulate the volume, see page 52. Audio volume adjusts automatically depending on vehicle speed, see page 188.

Audio source

Audio source is selected with CD/MD (3) or AM/FM (2). Repeatedly pressing AM/FM

moves between *FM1*, *FM2* and *AM*. The selected audio source appears on the display.

Audio settings

Adjusting audio settings

- Press SOUND (5). Scroll among audio settings by pressing SOUND again.
- Turn TUNING (4) to adjust the level.

The following audio settings are available via SOUND:


- *BASS* – Bass level.
- *TREBLE* – Treble level.
- *FADER* – Balance between the front and rear speakers.
- *BALANCE* – Balance between the left and right-hand speakers.
- *SUBWOOFER*¹ – Bass speaker level. The woofer must be activated before adjustment is possible. See page 187.
- *CENTRE*² – Centre speaker level. Three channel stereo or Pro Logic II must be activated before adjustment is possible, see page 187.
- *SURROUND*² – Surround sound level. Three channel stereo or Pro Logic II must

be activated before adjustment is possible, see page 187.

Activating/deactivating the subwoofer

- Press MENU and then ENTER.
- Scroll to *Audio settings* and press ENTER.
- Scroll to *Subwoofer* and press ENTER.

Surround

 Surround settings² govern the spatial perception of the sound. Settings for FM radio and CD/MD player are stored individually.

NOTE! If FM radio reception becomes poor, two or three-channel stereo may provide better sound quality than surround sound.

The Dolby icon in the display indicates that Dolby Pro Logic II is active. There are three different settings for surround sound:

- *Pro Logic II*
- *3 channel*
- *Off* – two-channel stereo.

1. Option.
2. Premium Sound.

Audio functions

Activating/deactivating surround sound

- Press MENU and then ENTER.
- Scroll to *Audio settings* and press ENTER.
- Scroll to *Surround FM* or *Surround CD/MD* and press ENTER.
- Scroll to *Pro Logic II, 3 channel* or *Off* and press ENTER.

Equalizer front/rear

The equalizer¹ can be used to adjust sound in the front and the rear separately.

Adjusting equalizer

- Press MENU and then ENTER.
- Scroll to *Audio settings* and press ENTER.
- Scroll to *Equalizer front* or *Equalizer rear* and press ENTER.

The graphic in the display indicates the level of the frequency.

- Adjust the level with TUNING (4) or up/down on the navigation button. Additional frequencies can be selected using the left/right navigation button.
- Use ENTER to save or EXIT to close.

Auto volume control

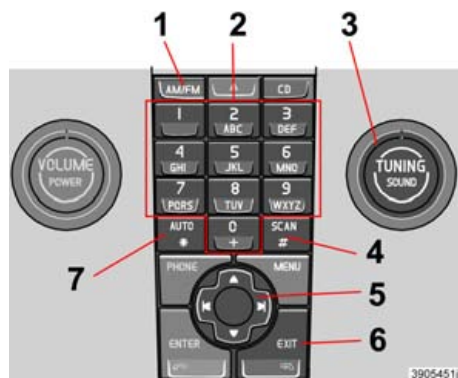
The auto volume control function allows the volume of the media player to increase as the speed of the car increases. There are three levels to choose from: *Low, Medium and High*.

Adjusting auto volume control

- Press MENU and then ENTER.
- Scroll to *Audio settings* and press ENTER.
- Scroll to *Auto volume control* and press ENTER.
- Scroll to *Low, Medium* or *High* and press ENTER.

1. Certain audio systems.

Radio functions



Radio controls

1. FM/AM – Wavelength selection
2. Station presets
3. TUNING – Knob for station searches
4. SCAN – Scanning
5. Navigation button – Tuning and menus
6. EXIT – Cancel current function
7. AUTO – Automatic storage of stations

Tuning

Automatic tuning

- Select wavelength using AM/FM (1).
- Give a brief press, left or right, on the navigation button (5).

Manual tuning

- Select wavelength using AM/FM (1).
- Adjust the frequency by turning TUNING (3).

Tune into a station with a long press (left or right) on the navigation button or by using the steering wheel keypad:

- Hold the right or left side of the navigation button depressed until the desired frequency appears in the display.

As long as the frequency graphic appears in the display, searching can be resumed by briefly pressing the navigation button (left or right) (5).

Storing stations

Ten station presets can be stored per wavelength. FM has two memories for presets: *FM1* and *FM2*. Preset stations are selected using the preset buttons (2) or the steering wheel keypad.

Storing stations manually

- Tune into a station.
- Hold a station preset button depressed until the message *Station stored* appears in the display.

Automatic storage of stations

AUTO (7) seeks out the ten strongest radio stations and stores them automatically in a separate memory. The function is especially

useful in areas where one is unfamiliar with the radio stations and their frequencies.

Starting automatic storage of stations

- Select wavelength using AM/FM (1).
- Hold AUTO (7) depressed until *Autostoring...* appears in the display.

Once *Autostoring...* disappears from the display, the stations are stored. The radio continues in Auto mode and *Auto* appears in the display. The automatically stored stations can now be selected using the station preset buttons (2).

Cancelling automatic storage of stations

- Press EXIT (6).

Selecting an auto-stored preset

Allowing the radio to remain in Auto mode provides access to the autostored presets.

- Briefly press AUTO (7).
- Auto* appears in the display.
- Press a preset button (2).

The radio remains in Auto mode until it is exited by a brief press on AUTO (7), EXIT (6) or AM/FM (1).

Radio functions

Storing autostored presets in another memory

An autostored preset can be transferred to the FM or AM memory.

- Briefly press AUTO (7).

Auto appears in the display.

- Press a preset button.
- Press the button under which the station will be stored and hold it depressed until the message *Station stored* appears in the display.

The radio exits Auto mode and the stored station can be selected as a preset.

Scanning

SCAN (4) automatically searches for strong AM or FM stations. When a station is found, it is played for approx. eight seconds before scanning is resumed.

Activating/deactivating Scan

- Select wavelength using AM/FM.
- Press SCAN to activate.

SCAN appears in the display. Cancel with SCAN or EXIT.

Storing a station

A desired station can be stored as a preset while Scan is active.

- Press a preset button and hold it depressed until the message *Station stored* appears in the display.

Scan is interrupted and the stored station can be selected as a preset.

RDS functions

Radio Data System – RDS links FM transmitters into a network. An FM transmitter in such a network sends information that gives an RDS radio the following functions:

- Automatically switches to a stronger transmitter if reception in the area is poor.
- Searches for programme form, such as traffic information or news.
- Receives text information on current radio programme.

Some radio stations do not use RDS or only some of its functionality.

Programme functions

In FM mode, the radio can search for stations with certain programme forms. If a desired programme form is found, the radio can switch stations, interrupting the audio source currently in use. For example, if the CD player is in use, it is paused. The interrupting transmission is played at a preset volume; see page 192. The radio returns to the previous audio source and volume when the set programme type is no longer broadcast.

The programme functions alarm (ALARM), traffic information (TP), news (NEWS), and programme types (PTY) interrupt one another in order of priority, where alarm has the highest priority and programme types has the lowest. For further programme interruption settings, see EON and REG on page 192. The programme functions are modified via the menu system, see page 186.

Returning to the interrupted audio source

Press EXIT to return to the interrupted audio source.

Alarm

This function is used to warn of serious accidents and catastrophes. The alarm cannot be temporarily interrupted or deactivated. The message *ALARM!* appears on the display when an alarm message is transmitted.

Traffic information - TP



This function allows traffic information sent within a set station's RDS network to break through. *TP* indicates that the function is

activated. If the set station can send traffic information, *TP* appears in the display.

Activating/deactivating TP

- Press MENU and then ENTER.
- Scroll to *TP* and press ENTER.

Radio functions

TP from current station/all stations

The radio can interrupt with traffic information from only the set (current) station or from all stations.

- Select an FM station.
- Press MENU and then ENTER.
- Scroll to *Advanced radio settings* and press ENTER.
- Scroll to *TP* and press ENTER.
- Scroll to *TP Station* and press ENTER.

Either *TP from current station* or *TP from all stations* will appear in the display.

- Press ENTER.

Activating/deactivating TP search

TP search is beneficial during long journeys while an MD or CD is being played. The function automatically searches for traffic information within different RDS networks.

- Press MENU and then ENTER.
- Scroll to *Advanced radio settings* and press ENTER.
- Scroll to *TP* and press ENTER.
- Scroll to *TP search* and press ENTER.

News

NEWS

This function allows news broadcasts within a set station's RDS network to break through. The

message *NEWS* indicates that the function is active.

Activating/deactivating News

- Press MENU and then ENTER.
- Scroll to *News* and press ENTER.

News from current station/all stations

The radio can interrupt with news from only the set (current) station or from all stations.

- Select an FM station.
- Press MENU and then ENTER.
- Scroll to *Advanced radio settings* and press ENTER.
- Scroll to *News station* and press ENTER.

Either *News from current station* or *News from all stations* will appear in the display.

- Press ENTER.

Programme types - PTY

PTY

The PTY function can be used to select different programme types, such as *Pop music* and *Serious classic*. The PTY symbol

indicates that the function is active. The function allows programme types transmitted within a set station's RDS network to break through.

Activating/deactivating PTY

- Select *FM1* or *FM2* with FM/AM.
- Press MENU and then ENTER.

- Scroll to *PTY* and press ENTER.
- Scroll to *Select PTY* and press ENTER.

A list of programme types appears: *Current affairs*, *Information* etc. The PTY function is activated by selecting programme types and deactivated by clearing all PTYs.

- Select the desired programme types or *Clear all PTYs*.

Search PTY

This function searches the entire wavelength for the selected programme type.

- Activate PTY.
- Press MENU and then ENTER.
- Scroll to *PTY* and press ENTER.
- Scroll to *Search PTY* and press ENTER.

If the radio finds any of the selected programme types, *>/ To seek* appears in the display. Press the navigation button to the right to continue searching for another broadcast of the selected programme types.

Radio functions

Display of programme type

The programme type of the current station can be shown on the display.

NOTE! Not all radio stations support this function.

Activating/deactivating display

- Press MENU and then ENTER.
- Scroll to *PTY* and press ENTER.
- Scroll to *Show PTY* and press ENTER.

Radio text

Some RDS stations transmit information on programme content, artists, etc. This information can be shown in the display.

Activating/deactivating radio text

- Press MENU and then ENTER.
- Scroll to *Radio text* and press ENTER.

Automatic frequency update - AF

The AF function selects one of the strongest transmitters for a set station. The radio may sometimes need to search through the entire FM wavelength to find a strong transmitter. If this occurs, the radio mutes and *PI seek Exit to cancel* appears on the display.

Activating/deactivating AF

- Press MENU and then ENTER.

- Scroll to *Advanced radio settings* and press ENTER.
- Scroll to *AF* and press ENTER.

Regional radio programmes - REG

REG This function causes the radio to continue with a regional transmitter even if its signal strength is low. *REG* indicates that the function is active. The regional function is normally deactivated.

Activating/deactivating REG

- Press MENU and then ENTER.
- Scroll to *Advanced radio settings* and press ENTER.
- Scroll to *Regional* and press ENTER.

Enhanced Other Networks - EON

The EON function is particularly useful in urban areas with many regional radio stations. It allows the distance between the car and the radio station transmitter determine when programme functions should interrupt the current audio source.

- *Local* – interrupts only if the radio station transmitter is close.

- *Distant*¹ – interrupts if the station transmitter is far away, even if there is a lot of static.
- *Off* – no interruption for programmes from other transmitters.

Activating/deactivating EON

- Press MENU and then ENTER.
- Scroll to *Advanced radio settings* and press ENTER.
- Scroll to *EON* and press ENTER.
- Scroll to *Local*, *Distant* or *Off* and press ENTER.

Resetting RDS functions

Resets all radio settings to the original factory settings.

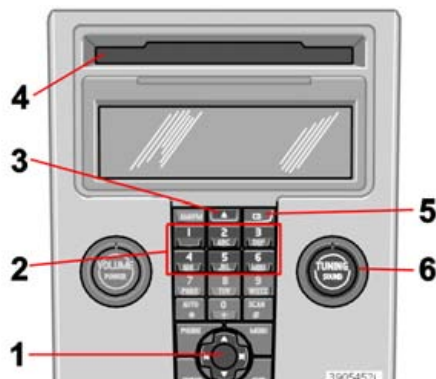
- Press MENU and then ENTER.
- Scroll to *Advanced radio settings* and press ENTER.
- Scroll to *Reset all* and press ENTER.

Volume control, programme types

The interrupting programme form is heard at the volume selected for such. If the volume level is adjusted during the programme interruption, the new level is saved until the next programme interruption.

1. Default/Factory setting.

CD and MD functions



CD and MD function controls

1. Navigation button – Fast forward/rewind, track selection and menus
2. CD changer position selection¹
3. CD or MD insertion/eject
4. CD or MD insertion/eject slot
5. CD/MD – Select CD or MD player¹
6. TUNING – Knob for track selection

CD or MD playback

If the volume is turned down completely, the CD and MD player is paused. The player is reactivated when volume is increased.

1. CD changer and combined CD/MD player are available as options.

CD and MD player

- Press CD/MD (5).

If a CD or MD is already in the player, playback starts automatically.

- Insert a CD or MD in the slot (4).

CD changer

- Press CD/MD (5).

If a CD position is selected, playback starts automatically.

- Select an empty position with buttons 1–6 or up/down with the navigation button.

An empty position is marked in the display. Wait until the text *Insert disc* appears before inserting a new disc. The CD changer can hold up to six CDs.

- Insert a CD in the slot of the CD changer (4).

Track selection

Use the left or right arrow of the navigation button (1) to come to the previous or next track. The track number is shown in the display. TUNING (6) (or the steering wheel keypad) can also be used for this purpose.

CD selection (CD changer)

Select a disc using position buttons 1–6, or by pressing up or down with the navigation

button (1). The disc and track number are shown on the display.

Fast forward/rewind of CD or MD

Press and hold the left or right arrow of the navigation button to rewind/fast forward. This continues as long as the navigation button is depressed.

CD and MD functions

Random

RND

When Random is active, the left or right arrow of the navigation button can be used to scroll between randomly selected tracks.

CD and MD player

This function plays CD or MD tracks in random order. *RND* is shown in the display while the function is active.

Activating/deactivating Random

- Start CD or MD playback.
- Press MENU and then ENTER.
- Scroll to *Random* and press ENTER.

CD changer

This function selects discs and tracks in random order. *RND* or *RND ALL* is shown in the display while the function is active.

NOTE! It is only possible to scroll between random tracks on the current disc.

Activating/deactivating Random

- Start CD playback.
- Press MENU and then ENTER.
- Scroll to *Random* and press ENTER.
- Scroll to *Single disc* or *All discs* and press ENTER.

Scan

Scan plays the first ten seconds of a CD or MD track.

- Press SCAN.
- Press EXIT to continue playback of the track.

Disc text

Title information stored on a CD can be shown in the display¹.

Activating/deactivating

- Start CD playback.
- Press MENU and then ENTER.
- Scroll to *Disc text* and press ENTER.

Disc eject

For reasons of traffic safety, a CD will remain in its ejected position max. 12 seconds before being drawn back into the player, which is then paused. The player is reactivated using CD/MD (5).

Single discs - CD and MD

- Press the eject button (3).

All discs - CD changer

- Press the eject button (3) (for more than 2 seconds).

The entire magazine is emptied disc by disc. The message *Ejecting all* is shown in the display.

CDs

Using CD discs burned at home could result in poor or non-existent sound. Music CD discs complying with the ISO 60908 standard provide the best sound quality.

IMPORTANT!

Only use standard discs (12 cm in diameter). Do not use CDs with adhesive disc labels. The heat in the CD player may cause the label to come off, damaging the CD player.

1. Applies to the combined CD/MD player and CD-changer only.

Menu structure - audio system

FM menu

1. News Off¹/On

2. TP Off/On¹

3. PTY

1. Select PTY
 1. Clear all PTY
 - 2-16. List of PTY
2. Search PTY
3. Show PTY On/Off

4. Radio text On/Off¹

5. Advanced radio settings

1. TP
 1. TP station
 2. TP search On/Off¹
2. News station
3. AF On¹/Off
4. Regional On/Off¹
5. EON
 1. Off
 2. Local
 3. Distant¹
6. Reset all

6. Audio settings

1. Surround FM²
 1. Dolby Pro Logic II
 2. 3 channel

3. Off¹

2. Surround CD/MD¹
 1. Dolby Pro Logic II
 2. 3 channel
 3. Off
3. Subwoofer³ Off/On¹
4. Equalizer front²
5. Equalizer rear²
6. Auto volume control
 1. Low
 2. Medium¹
 3. High
7. Reset all

AM menu

1. Audio settings

See *Audio settings* in FM menu.

CD and MD menu

1. Random Off¹/On

2. News Off¹/On

3. TP Off/On¹

4. Disc text Off¹/On

5. Audio settings

See *Audio settings* in FM menu.

CD changer menu

1. Random

1. Off¹
2. Single disc
3. All discs

2. News Off¹/On

3. TP Off/On¹

4. Disc text Off¹/On

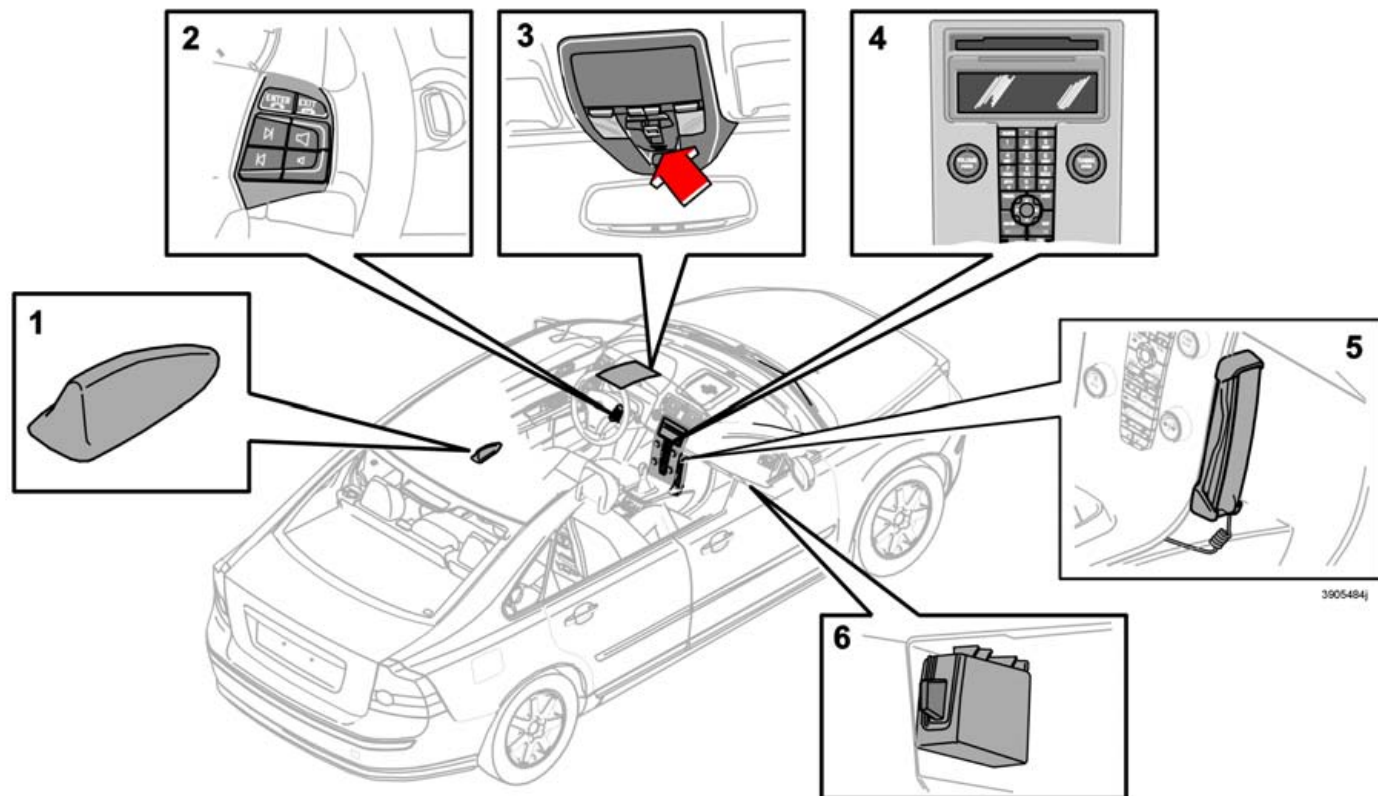
5. Audio settings

See *Audio settings* in FM menu.

1. Default/Factory setting.
2. Certain audio systems.

3. Option.

Telephone functions (option)



Telephone system components

Telephone functions (option)

Telephone system components

1. Antenna

2. Steering wheel keypad (option)

Most telephone system functions can be accessed via the keypad. See page 198.

3. Microphone

The hands free microphone is integrated in the roof console beside the rearview mirror.

4. Centre console control panel

All telephone functions (except call volume) can be regulated via the control panel.

5. Privacy handset (option)

6. SIM card reader

General

- Always put traffic safety first.
- If the driver needs to use the privacy handset, park the car in a safe place first.
- Switch off the telephone system when refuelling the car.
- Switch off the system near blasting work.
- Only entrust telephone system servicing to an authorised Volvo workshop.

Emergency calls

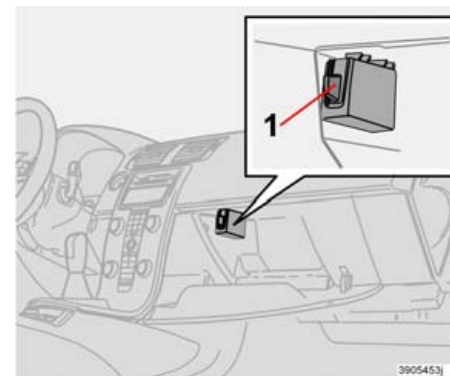
Emergency calls to alarm centres can be made without a SIM card as long as there is coverage by a GSM operator.

Making an emergency call

- Activate the telephone.
- Ring the emergency number that applies to your region (within EU: 112).
- Press ENTER.

IDIS

(Intelligent Driver Information System) The IDIS system allows incoming telephone calls and text (SMS) messages to be delayed so that the driver can concentrate on driving. Incoming calls and text messages can be delayed five seconds before they are connected. Missed calls are shown on the display. IDIS can be deactivated using menu function 5.6.2. See page 203.



SIM card

The telephone can only be used with a valid SIM card (Subscriber Identity Module). The card is available from various network operators. Contact your network operator if you experience difficulties with the SIM card.

Double SIM cards

Many network operators offer two SIM cards for the same telephone number. The extra SIM card can be used in the car.

Inserting the SIM card

- Switch off the telephone and open the glovebox.
- Pull out the SIM card holder (1) in the SIM card reader.

Telephone functions (option)

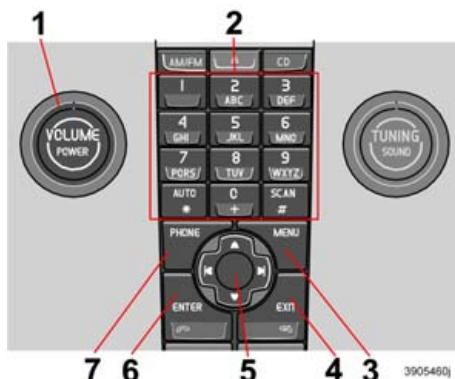
- Position the SIM card in the holder with the metal surface visible. The bevelled edge of the SIM card should align with the bevel of the SIM card holder.
- Carefully press in the SIM card holder.

Menus

Page 186 describes how to control telephone functions with the menu system.

Traffic safety

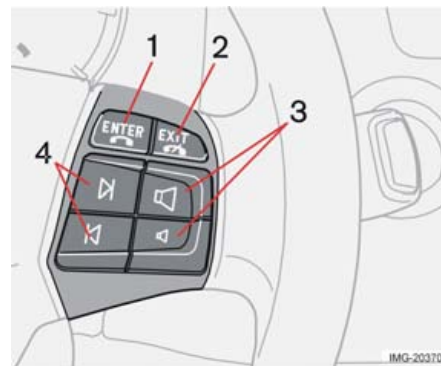
For safety reasons, parts of the telephone menu system cannot be accessed at speeds in excess of 8 km/h. Only activities started in the menu system can be completed. The speed limiter can be deactivated using menu function 5.6.1 Menu lock, see page 203.



Centre console control panel

Telephone controls

1. VOLUME – Control the background volume from the radio, for example, during a call
2. Number and letter buttons
3. MENU – Opens the main menu
4. EXIT – End/refuse calls, clear entered characters
5. Navigation button – Scroll in menus and character rows
6. ENTER – Accept calls, activate the telephone from standby mode
7. PHONE – On/off and standby mode



Steering wheel keypad

When the telephone is active, the steering wheel keypad is locked to telephone functions. To control the audio system, the telephone must be in standby mode.

1. ENTER – Works the same as on the control panel
2. EXIT – Works the same as on the control panel
3. Call volume – Increase/decrease
4. Navigation buttons – Scroll in menus

Telephone functions (option)

On/Off

A handset appears in the display when the telephone system is active or in standby mode. If the ignition key is turned to position **0** when the telephone is in one of these mode, the telephone automatically resumes this mode the next time the key is turned to position **I** or **II**.

Activating the telephone system

Telephone system functions can only be used when the telephone is in active mode.

- Press PHONE.
- Enter the PIN code (if necessary) and press ENTER.

Deactivating the telephone system

No calls can be received when the telephone is deactivated.

- Hold PHONE depressed until the telephone is activated.

Standby

In standby mode, the audio system can be in use while calls are received. However, it is not possible to make calls when in standby mode.

Putting the telephone in standby mode

The telephone must first be in active mode before it can be put in standby mode.

- Press PHONE or EXIT.

Activating from standby mode

- Press PHONE.

Making and receiving calls

If the privacy handset is raised when a phone call is started, the sound will come from the handsfree system. For information on switching between privacy handset and handsfree during a call, see page 201.

To call

- Activate the telephone system (if necessary).
- Dial the number or use the phone book; see page 201.
- Press ENTER or lift the handset. Release the handset by pressing it down.

Receiving a call

For Auto answer, see menu option 4.3, page 203.

- Press ENTER or lift the handset. Release the handset by pressing it down.

Ending a call

- Press EXIT or hang up the handset.

Refusing a call

- Press EXIT.

Call waiting

A two-tone signal during a telephone call indicates that there is another incoming call. *Answer? appears on the display.* The call can be refused or taken in the normal manner. If

the incoming call is taken, the previous call is put on hold.

Putting a call on hold/resuming a call

- Press MENU.
- Scroll to *Hold* or *Hold off* and press ENTER.

Dialling a third party

- Put the call on hold.
- Dial the number of the third party.

Switching between calls

- Press MENU.
- Scroll to *Swap* and press ENTER.

Starting a conference call

A conference call consists of at least three parties that can talk to one another. Once a conference call has been initiated, no more parties can be connected. All calls are ended when the conference call is ended.

- Press MENU.
- Scroll to *Join* and press ENTER.

Telephone functions (option)

Volume

The telephone uses the driver's door or centre speaker¹.

Call volume



Call volume is regulated with the buttons of the steering wheel keypad.

If the privacy handset is used, volume is regulated with a wheel on the side of

the handset.

Audio system volume

Audio system volume is temporarily lowered during a telephone call. Once the call is ended the previous volume is resumed. If the volume is regulated during the call, the new level is retained once the call is ended. Sound can also be automatically muted during a telephone call; see menu 5.5.3, page 203. This function is only available with the Volvo integrated telephone system.

Entering text

Text is entered using the telephone keypad.

- Press the button with the desired character - once for the first character on the button, twice for the second, etc. See table.

- Press 1 for a space. If two characters in a row are to be entered using the same button, press * or wait a few seconds.

A brief press on EXIT will clear an entered character. A long press on EXIT will clear all entered characters.

1	space 1- ? ! , . : " ' ()
2	a b c 2 ä å à æ ç
3	d e f 3 è é
4	g h i 4 i
5	j k l 5
6	m n o 6 ñ ö ò Ø
7	p q r s 7 ß
8	t u v 8 ü ù
9	w x y z 9
*	Used if two characters are to be entered with the same button.
0	+ 0 @ * # & \$ £ / %
#	Switch between upper and lower case.

Handling numbers

Calling the last number dialled

The telephone automatically stores the last telephone numbers dialled.

- Press ENTER.
- Scroll to a number and press ENTER.

Phone book

If the phone book contains the desired party's contact information, these are shown in the display. Contact information can be stored on the SIM card and in the telephone.

Storing contacts in the phone book

- Press MENU.
- Scroll to *Phone book* and press ENTER.
- Scroll to *New number* and press ENTER.
- Enter a name and press ENTER.
- Enter a number and press ENTER.
- Scroll to *SIM card* or *Phone book* and press ENTER.

1. Premium Sound.

Telephone functions (option)

Searching for contacts in the phone book

Use the down arrow of the navigation button instead of MENU for direct access to the *Search* menu.

- Press MENU.
- Scroll to *Phone book* and press ENTER.
- Scroll to *Search* and press ENTER.
- Enter the first few letters of the item and press Enter or simply press ENTER.
- Scroll to an item and press ENTER.

Copying entries between the SIM card and Phone book

- Press MENU.
- Scroll to *Phone book* and press ENTER.
- Scroll to *Copy all* and press ENTER.
- Scroll to *SIM to phone* or *Phone to SIM* and press ENTER.

Deleting contacts from the phone book

- Press MENU.
- Scroll to *Phone book* and press ENTER.
- Scroll to *Search* and press ENTER.
- Enter the first few letters of the item and press Enter or simply press ENTER.
- Scroll to the item to be erased and press ENTER.
- Scroll to *Erase* and press ENTER.

Speed dial

A keypad button (1-9) can be used as a speed dial number for a contact in the phone book.

- Press MENU.
- Scroll to *Phone book* and press ENTER.
- Scroll to *One-key dial* and press ENTER.
- Scroll to *Select numbers* and press ENTER.
- Scroll to the digit of the keypad button for the speed dial number and press ENTER.
- Enter the first few letters of the item and press Enter or simply press ENTER.
- Scroll to an item and press ENTER.
- Hold EXIT depressed to leave the menu system.

Calling using speed dial

- Hold the desired keypad button for approx. two seconds or briefly press the button and then ENTER.

NOTE! When the telephone is switched on, it takes a while before speed dialling is available. Menu option 3.4.1 must be activated to use the speed dial function.

Calling from the phone book

- Press MENU.
- Scroll to *Phone book* and press ENTER.

All contacts in the phone book memory are displayed. The number of contacts displayed can be reduced by entering part of the contact's name.

- Scroll to a contact and press ENTER.

NOTE! Press ENTER to dial.

Functions during a call

Several functions are available during a call. Some functions can only be used when a call is on hold.

Press MENU to access the In-call menu and scroll to one of the following alternatives:

- *Mute/Mute off* – Mute mode.
- *Hold/Hold off* – Put a call on hold or resume a call.
- *Handsfree/Handset* – Use handsfree or the privacy handset.
- *Phone book* – Access the phone book.
- *Join* – Conference calling (available if more than three parties are connected)
- *Swap* – Switch between two calls (available if up to three parties are connected).

Telephone functions (option)

SMS - Short Message Service

Reading SMS

- Press MENU.
- Scroll to *Messages* and press ENTER.
- Scroll to *Read* and press ENTER.
- Scroll to a message and press ENTER.

The message text appears in the display.

Additional selections can be made by pressing ENTER. Hold EXIT depressed to leave the menu system.

Writing and sending

- Press MENU.
- Scroll to *Messages* and press ENTER.
- Scroll to *Write new* and press ENTER.
- Enter text and press ENTER.
- Scroll to *Send* and press ENTER.
- Enter a phone number and press ENTER.

IMEI number

To block the telephone, you must provide your network operator with the telephone's IMEI number. This is a 15 digit serial number that is programmed in the phone. To display this number, dial *#06#. Make a note of this number and keep it in a safe place.

Specifications

Output	2 W
SIM card	Small
Memory entries	255 ¹
SMS (Short Message Service)	Yes
Data/Fax	No
Dualband (900/1800 MHz)	Yes

1. The capacity of the SIM card's memory varies depending on the subscription.

Menu structure - telephone

Overview

1. Call register

- 1.1. Missed calls
- 1.2. Received calls
- 1.3. Dialed no.
- 1.4. Erase list
 - 1.4.1. All calls
 - 1.4.2. Missed calls
 - 1.4.3. Received calls
 - 1.4.4. Dialed no.
- 1.5. Call duration
 - 1.5.1. Last call
 - 1.5.2. Number of calls
 - 1.5.3. Total time
 - 1.5.4. Reset time

2. Messages

- 2.1. Read
- 2.2. Write
- 2.3. Message sett.
 - 2.3.1. SMSC number
 - 2.3.2. Validity time
 - 2.3.3. Message type

3. Phone book

- 3.1. New number
- 3.2. Search
- 3.3. Copy all
 - 3.3.1. SIM to telephone
 - 3.3.2. Telephone to SIM
- 3.4. One-key dial
 - 3.4.1. Active

- 3.4.2. Select number

- 3.5. Erase SIM
- 3.6. Erase phone
- 3.7. Memory status

4. Call options

- 4.1. Send my no.
- 4.2. Call waiting
- 4.3. Auto answer
- 4.4. Automatic redial
- 4.5. Diversion
 - 4.5.1. All calls
 - 4.5.2. When engag.
 - 4.5.3. Not answered
 - 4.5.4. Not reachable
 - 4.5.5. Fax calls
 - 4.5.6. Data calls
 - 4.5.7. Cancel all diverts

5. Tel. settings

- 5.1. Network
 - 5.1.1. Automatic
 - 5.1.2. Manual select
- 5.2. Language
 - 5.2.1. English UK
 - 5.2.2. English US
 - 5.2.3. Español
 - 5.2.4. Français CAN
 - 5.2.5. Français FR
 - 5.2.6. Italiano
 - 5.2.7. Nederlands
 - 5.2.8. Português BR
 - 5.2.9. Português P

- 5.2.10. Suomi

- 5.2.11. Svenska
- 5.2.12. Dansk
- 5.2.13. Deutsch

5.3. SIM security

- 5.3.1. On
- 5.3.2. Off
- 5.3.3. Automatic

5.4. Edit codes

- 5.4.1. PIN code
- 5.4.2. Phone code

5.5. Sound

- 5.5.1. Ring volume
- 5.5.2. Ring signal
- 5.5.3. Mute radio
- 5.5.4. Msg. beep

5.6. Traff. safety

- 5.6.1. Menu lock
- 5.6.2. IDIS

5.7. Factory sett.

Menu structure - telephone

Description of menu options

1. Call register

1.1. Missed calls

List of missed calls. You can choose to call, erase or store the number in the phone book.

1.2. Received calls

List of received calls. You can choose to call, erase or store the number in the phone book.

1.3. Dialed no.

List of dialed numbers. You can choose to call, erase or store the number in the phone book.

1.4. Erase list

Erase the lists found in the menus 1.1, 1.2 and 1.3 as below.

- 1.4.1. All
- 1.4.2. Missed
- 1.4.3. Received
- 1.4.4. Dialed no.

1.5. Call duration

Duration of all calls or of the most recent call. The telephone code is required to reset the call timer (see menu 5.4).

- 1.5.1. Last call
- 1.5.2. Number of calls
- 1.5.3. Total time
- 1.5.4. Reset time

2. Messages

2.1. Read

Received text messages. Select whether to erase, forward, change or save the entire message or parts of it.

2.2. Write

Write a message using the keypad. Choose whether to save or send it.

2.3. Message sett

Enter the number (SMSC number) of the message centre to which messages are to be transferred as well as how long they are to be saved at the message centre. Contact your network operator for information on message settings. Normally, these settings should not be altered.

- 2.3.1. SMSC number
- 2.3.2. Validity time
- 2.3.3. Message type

3. Phone book

3.1. New number

Store names and phone numbers in the phone book; see page 200.

3.2. Search

Search for a name in the phone book.

3.3. Copy all

Copy telephone numbers and names from the SIM card to the telephone memory.

3.3.1. From SIM to telephone memory

3.3.2. From telephone to SIM memory

3.4. One-key dial

A number stored in the phone book can be stored as a speed dial number.

3.5. Erase SIM

Erase the entire SIM card memory.

3.6. Erase phone

Erase the entire telephone memory.

3.7. Memory status

Shows how many positions are occupied in the SIM card and telephone memory. The table shows how many of the total number of positions are occupied, e.g. 100 (250).

4. Call options

4.1. Send my no.

Displays or hides your phone number to/from the person you call. Contact your network operator regarding ex-directory numbers.

4.2. Call waiting

Be alerted during a phone call that there is another incoming call.

4.3. Auto answer

Automatically answers incoming calls.

4.4. Call back

Calls a previously engaged number.

Menu structure - telephone

4.5. Diversion

Choose when and what type of calls are to be diverted to a specified telephone number.

- 4.5.1. All calls (this setting only applies during the call in progress).
- 4.5.2. When engag.
- 4.5.3. Not answered
- 4.5.4. Not reachable
- 4.5.5. Fax calls
- 4.5.6. Data calls
- 4.5.7. Cancel all divers

5. Telephone settings

5.1. Network

Choose a network automatically or manually. The selected operator is shown in the display in the telephone's basic mode.

- 5.1.1. Auto
- 5.1.2. Manual select

5.2. Language

Select the telephone language.

- 5.2.1. English UK
- 5.2.2. English US
- 5.2.3. Español
- 5.2.4. Français CAN
- 5.2.5. Français FR
- 5.2.6. Italiano
- 5.2.7. Nederlands
- 5.2.8. Português BR
- 5.2.9. Português P

- 5.2.10. Suomi
- 5.2.11. Svenska
- 5.2.12. Dansk
- 5.2.13. Deutsch

5.3. SIM security

Select if the PIN code should be on, off or if the telephone should automatically give the PIN code.

- 5.3.1. On
- 5.3.2. Off
- 5.3.3. Automatic

5.4. Edit codes

Change PIN or telephone code. Make a note of the codes and keep them in a safe place.

- 5.4.1. PIN code
- 5.4.2. Phone code. The factory-set telephone code 1234 is used until you change to your own code. The telephone code is used to reset the call timer.

5.5. Sound

- 5.5.1. Volume. Adjust the ring tone volume.
- 5.5.2. Ring signal. There are seven different ring tones.
- 5.5.3. Mute radio: On/Off
- 5.5.4. Msg. beep

5.6. Traffic safety

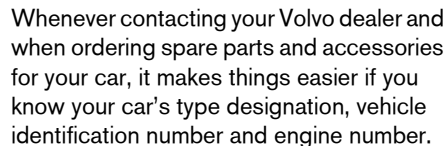
- 5.6.1. Menu lock. Deactivating the menu lock allows access to the entire menu while driving.
- 5.6.2. IDIS. If the IDIS function is deactivated, incoming calls are not delayed, regardless of the driving situation.

5.7. Factory sett.

Reset the system's factory settings.

Technical data

Type designation	208
Dimensions and weights	209
Engine specifications	210
Engine oil	212
Other fluids and lubricants	216
Fuel	218
Catalytic converter	220
Electrical system	221



1. Type designation, vehicle identification number, maximum permissible weights, codes for colour and upholstery and type approval number.
a: variant 1
b: variant 2
2. Decal for parking heater.
3. Engine type designation, component and serial number.
4. VIN number (type and model year designation plus chassis number).
5. Decal for engine oil.
6. Gearbox type designation and serial number
(a) manual gearbox
(b), (c) automatic gearbox

Dimensions and weights

Dimensions

Length: 447 cm

Width: 177 cm

Wheelbase: 264 cm

Front track: 154–155 cm

Rear track: 153–154 cm

Weights

The kerb weight includes the driver, the fuel tank 90 % full and all fluids. The weight of passengers and accessories, such as a towbar, towball load (when a trailer is hitched, see table), load carriers, and space box etc. influence the payload and must not be included in the kerb weight. Permitted weight (in addition to driver) = Gross vehicle weight – Kerb weight.

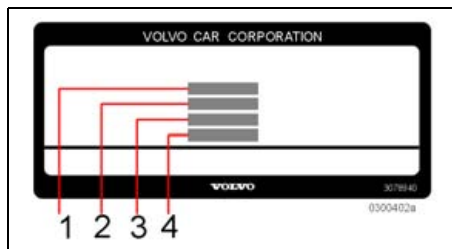


WARNING!

The car's driving characteristics change depending on how heavily it is loaded and how the load is distributed.



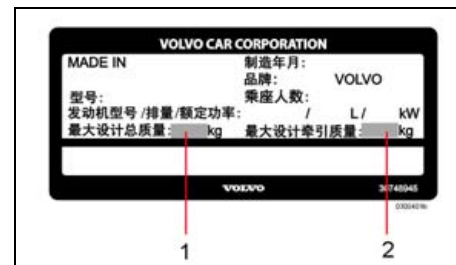
Variant 1



Variant 2

See decal location on page 208.

1. Max. total weight
2. Max. train weight (car + trailer)
3. Max. front axle load
4. Max. rear axle load



Only for China

1. Max. total weight
2. Maximum trailer weight

Maximum load: See registration document.

Maximum roof load: 75 kg

Trailer with brakes

Maximum trailer weight	Maximum towball load
1.6 1200 kg	75 kg
1.6D manual 1300 kg	
1.8 1300 kg	
others 1500 kg	

Trailer without brakes

Maximum trailer weight	Maximum towball load
700 kg	50 kg

Engine specifications

	1.6	1.8	2.4	2.4i	T5	1.6D
Engine designation	B4164S3	B4184S11	B5244S5	B5244S4	B5254T3	D4164T
Output (kW/rps)	74/100	92/100	103/83	125/100	162/83	80/67
(hp/rpm)	100/6000	125/6000	140/5000	170/6000	220/5000	109/4000
Torque (Nm/rps)	150/67	165/67	220/67	230/73	320/25-80	240/
(kpm/rpm)	15,3/4000	16,8/4000	22,4/4000	23,4/4400	32,6/1500-4800	24,5/
No. of cylinders	4	4	5	5	5	4
Bore (mm)	79	83	83	83	83	75
Stroke (mm)	81.4	83.1	90	90	93.2	88.3
Swept volume (dm ³ or litres)	1.60	1.80	2.44	2.44	2.52	1.56
Compression ratio	11.0:1	10.8:1	10.3:1	10.3:1	9.0:1	18.3:1
Spark plugs:						
Electrode gap (mm)	1,2	1,3	3x0.6 +/-0.1	3x0.6 +/-0.1	0.7 +0.1	-
Tightening torque (Nm)	15 ±2	12	30	30	30	-

Engine type designation, component and serial number can be read on the engine, see page 208.

Engine specifications

	2.0D	2.0D	D5
Engine designation	D4204T	D4204T2¹	D5244T8
Output (kW/rps)	100/67	98/67	132/67
(hp/rpm)	136/4000	133/4000	180/4000
Torque (Nm/rps)	320/33	320/33	350/29-54
(kpm/rpm)	32.6/2000	32.6/2000	35.7/1750-3250
No. of cylinders	4	4	5
Bore (mm)	85	85	81
Stroke (mm)	88	88	93.2
Swept volume (dm ³ or litres)	2.00	2.00	2.40
Compression ratio	18.5:1	18.5:1	17.0:1
Spark plugs:			
Electrode gap (mm)	-	-	-
Tightening torque (Nm)	-	-	-

1. France

Engine type designation, component and serial number can be read on the engine, see page 208.

Engine oil

Adverse driving conditions

Check the oil level more frequently for long journeys:

- towing a caravan or trailer.
- in mountainous regions.
- at high speeds.
- In temperatures colder than $-30\text{ }^{\circ}\text{C}$ or hotter than $+40\text{ }^{\circ}\text{C}$.

Also check the oil level more often if the car is often driven short distances (less than 10 km) when temperatures are low (below $+5\text{ }^{\circ}\text{C}$).

This can produce abnormally high oil temperature or oil consumption.

Choose a fully synthetic engine oil for adverse driving conditions. It provides extra protection for the engine.

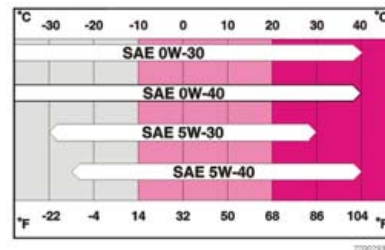
Volvo recommends  oil products.

IMPORTANT!

Always use the prescribed oil grade and viscosity.

If an oil other than that prescribed has been used, contact the local authorised Volvo workshop immediately for service.

Do not use oil additives. These can damage the engine.



Viscosity chart

Engine oil



Oil decal.

The following applies when the aforementioned decal is fitted in the car's engine compartment. For location, see page 208.

Oil grade: ACEA A1/B1

Viscosity: SAE 5W-30

When driving under adverse conditions, use ACEA A5/B5 SAE 0W-30.

Capacities

Engine variant		Volume between MIN-MAX (litres)	Volume ¹ (litres)
2.4	B5244S5	1.6	5.8
2.4i	B5244S4		
T5	B5254T3		

1. Including filter change.

Engine oil



Oil decal.

The following applies when the aforementioned decal is fitted in the car's engine compartment. For location, see page 208.

Oil grade: WSS-M2C913-B

Viscosity: SAE 5W-30

When driving under adverse conditions, use ACEA A5/B5 SAE 0W-30.

Capacities

Engine variant		Volume between MIN-MAX (litres)	Volume ¹ (litres)
1.6	B4164S3	0.75	4,0
1.8	B4184S11		4.3
1.6D	D4164T	1,0	3.7
2.0D	D4204T	2.0	5.5
2.0D	D4204T2		

1. Including filter change.

Engine oil



When the oil decal shown alongside here is in the car's engine compartment, the following applies. See location on page 208.

Oil grade: ACEA A5/B5

Viscosity: SAE 0W-30

Oil decal

Capacities

Engine variant		Volume between MIN - MAX (litres)	Volume ¹ (litres)
D5	D5244T8	1.5	6.0

1. Including filter change.

Other fluids and lubricants

IMPORTANT!

The recommended transmission fluid must be used to prevent damage to the gearbox. Do not mix with any other transmission fluid. If the transmission is topped up with a different fluid, contact an authorised Volvo workshop for servicing.

Fluid	System	Volume	Recommended oil grade
Gearbox oil	1.6 Manual 5 speed	2.1 litres	Transmission fluid: WSD-M2C200-C
	1.8 Manual 5 speed	1.9 litres	
	1.6D Manual 5 speed	1.9 litres	
	2.0D Manual 5 speed	2.2 litres	Transmission fluid: WSS-M2C200-C3
	2.0D Manual 6 speed	1.7 litres	Transmission fluid: WSD-M2C200-C
	D5 Automatic gearbox	7.75 litres	Transmission fluid: JWS 3309
	2.4 Manual 5 speed	2.1 litres	Transmission fluid: MTF 97309-10
	2.4 Automatic gearbox	7.75 litres	Transmission fluid: JWS 3309
	2.4i Manual 5 speed	2.1 litres	Transmission fluid: MTF 97309-10
	2.4i Automatic gearbox	7.75 litres	Transmission fluid: JWS 3309
	T5 Manual 6 speed	2.0 litres	Transmission fluid: MTF 97309-10
	T5 Automatic gearbox	7.75 litres	Transmission fluid: JWS 3309
Coolant	5 cyl. Petrol, manual gearbox	9.5 litres	Coolant with corrosion inhibitor mixed with water, see packaging. The thermostat starts opening at: 90 °C in petrol engines and at 82 °C in diesel engines. petrol engine (1.6) 82 °C diesel engine (1.6D) 83 °C
	5 cyl. Petrol, automatic gearbox	10.0 litres	
	5 cyl. Diesel (D5)	11.0 litres	
	4 cyl. Petrol (1.8)	7.5 litres	
	4 cyl. Diesel (2.0D)	9.5 litres	
	4 cyl. Petrol (1.6)	6.2 litres	
	4 cyl. Diesel (1.6D)	7.2 litres	

Other fluids and lubricants

Fluid	System	Volume	Recommended oil grade
Air conditioning ¹		180–200 grams	Compressor oil PAG
		500–600 grams	Refrigerant R134a (HFC134a)
Brake fluid		0.6 litres	DOT 4+
Power steering	System:	1.2 litres	Power steering fluid: WSS M2C204-A or equivalent product with same specifications.
	of which reservoir	0.2 litres	
Washer fluid	4 cyl. Petrol/5 cyl. Diesel	4.0 litres	Use a washer antifreeze recommended by Volvo, mixed with water for temperatures below freezing.
	5 cyl. Petrol	6.5 litres	
Fuel tank	See page 218		

1. Weights can vary depending on the engine variant. Contact an authorised Volvo workshop for the exact information.

Fuel

Consumption, emissions and volume

Engine		Gearbox	Consumption litre/100 km	Emissions of CO ₂ (g/km)	Tank volume (litres)
1.6	B4164S3	Manual 5 speed (IB5)	7.2	171	55
1.8	B4184S11	Manual 5 speed (MTX75)	7.2	172	55
2.4	B5244S5	Manual 5 speed (M56)	8.4	199	62
		Automatic gearbox (AW55-50/51)	9.1	217	
2.4i	B5244S4	Manual 5 speed (M56)	8.5	203	62
		Automatic gearbox (AW55-50/51)	9.1	217	
T5	B5254T3	Manual 6-speed (M66)	8.7	208	62
		Automatic gearbox (AW55-50/51)	9.4	224	
T5 AWD		Manual 6-speed (M66)	9.6	229	57
		Automatic gearbox (AW55-50/51)	10.1	241	
1.6D	D4164T (EURO3) (EURO4)	Manual 5 speed (MTX75)	4.9	129	52
2.0D	D4204T (EURO3)	Manual 6 speed (MMT6)	5.6	148	52
	(EURO4)		5.8	154	
	(EURO3)	Manual 5 speed (M56L2)	5.6	148	
	(EURO4)		5.6	148	
	D4204T2 ¹ (EURO3) (7CV) (EURO4)	Manual 6 speed (MMT6)	5.6	148	52
	D4204T2 ¹ (7CV) nPDF (EURO4)	Manual 5 speed (M56L2)	5.6	148	52
D5	D5244T8	Automatic gearbox (AW55-51)	7.0	184	60
1.8F	B4184S8	Manual 5 speed (MTX75)	7.4	177	55

1. France

Fuel

Fuel consumption and emissions of carbon dioxide

Official fuel consumption figures are based on a standard driving cycle in accordance with EU Directive 80/1268 comb. Fuel consumption figures may change if the car is equipped with extra equipment that affects the car's weight. The manner in which the car is driven and other non-technical factors can affect fuel consumption. Consumption is higher and power output lower for fuel with an octane rating of 91 RON.

Petrol

Most engines can be run with octane ratings of 91, 95 and 98 RON.

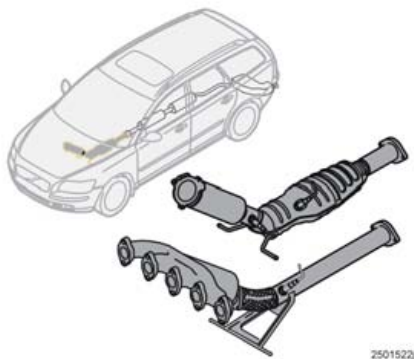
- 91 RON must **not** be used in 4 cylinder engines.
- 95 RON can be used for normal driving.
- 98 RON is recommended for optimum performance and minimum fuel consumption.

When driving in temperatures above +38 °C, it is recommended to use fuel with the highest possible octane rating for optimum performance and fuel economy.

Petrol: Standard EN 228

Diesel: Standard EN 590

Catalytic converter



General

The purpose of the catalytic converter is to purify exhaust gases. It is located in the flow of exhaust gasses close to the engine so that it quickly reaches operating temperature. The catalytic converter consists of a monolith (ceramic or metal) with channels. The channel walls are lined with a thin layer of platinum, rhodium and palladium. These metals act as catalysts, i.e. they participate in and accelerate a chemical reaction without being used up themselves.

Lambda-sond™ oxygen sensor

The Lambda-sond is part of a control system intended to reduce emissions and improve fuel economy.

An oxygen sensor monitors the oxygen content of the exhaust gases leaving the engine. This value is fed into an electronic system that continuously controls the injectors. The ratio of air to fuel is continuously adjusted. These adjustments create optimal conditions for efficient combustion, and together with the three-way catalytic converter reduce harmful emissions (hydrocarbons, carbon monoxide and nitrous oxides).

Electrical system

General

12 volt system with a voltage-regulated alternator. Single pole system in which the chassis and engine block are used as conductors.

Battery

Voltage	12 V	12 V	12 V
Cold start capacity (CCA)	520 A	600 A ¹	700 A ²
Reserve capacity (RC)	100 min	120 min	150 min

1. Cars equipped with High Performance audio system.
2. Diesel cars with Premium Sound audio system, fuel-driven heater, RTI.

If the battery is changed, replace it with a battery of the same cold start capacity and reserve capacity as the original (see the decal on the battery).

Alternator

Max. current = 120/150 A¹

Starter motor

Output = 1.4/1.9 kW¹

Certification of keyless drive system

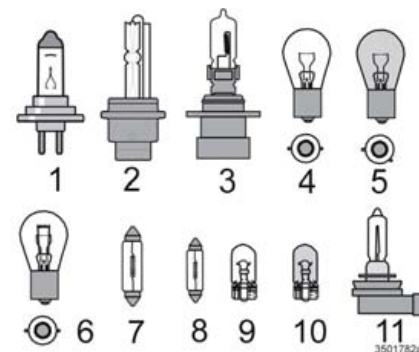
Siemens VDO Automotive A.G. hereby certifies that this equipment type 5WK4 8952, 5WK48956, 5WK48812 conforms to the essential characteristic requirements and other relevant regulations of directive 1999/5/EU.

1. Dependent on engine variant

Electrical system

Bulbs

Lighting	Output W	Socket
1. Dipped beam	55	H7
2. Bi-Xenon	35	D2S
3. Main beam	55	HB3
4. Brake lights, reversing lamps, rear fog lamp	21	BA15s
5. Direction indicators, front/rear (yellow)	21	BAU 15s
6. Rear position/parking lamps, rear side marker lamps	5	BAY15d
7. Courtesy lighting, cargo area lighting, number plate lighting	5	SV8.5
8. Vanity mirror	1.2	SV5.5
9. Front position/parking lamps, front side marker lamps	5	W 2.1 x 9.5d
10. Direction indicators in door mirrors (yellow)	5	W 2.1 x 9.5d
11. Fog lamps	55	H11
Glovebox lighting	3	BA9



A	
A/C	70, 74
ABS	115
ABS fault	41
Active Yaw Control	117
Additional heater	78
AF – automatic frequency update	192
Air conditioning	
A/C	70
ECC	72
general	68
Air conditioning, general	68
Air distribution	75
Air distribution, ECC	73
Air quality system, ECC	73
Airbag, driver's and front	
passenger side	14
Alarm	89, 190
activating/deactivating	99
alarm signals	100
deactivating	99
general	99
system test	100
All-wheel drive	114
Alternator	221
Approach lighting	
active lamps	60
setting	65
Audio volume	
audio system	187
media player	187
Audio, see also Sound	187
AUTO	
climate control settings	72
preset storage	189
Auto volume control	188
Automatic car wash	154
Automatic gearbox	
general	111
safety system	111
starting the engine	106
towing and recovery	121
trailer	124, 125
Autostart	106
Average fuel consumption	48
AYC	117

B

Backrest	
front seat, lowering	80
rear seat, tipping	86
Bass speaker	187
Battery	
changing	170
jump starting	123
overload	104
specifications	221
symbols on the battery	169
Battery care	169
Bonnet	162
Booster cushion, integrated	30

Boot lid	
automatic locking	96
driving with open boot lid	104
Brake fluid, checking and topping up	167
Brake system	115, 167
Bulb holder	
location of the bulbs	175
removal	174
Bulbs	
replacement	171
specifications	222

C

Call	
functions during a call	201
telephone volume	200
Call waiting	199
Calls	
making and receiving	199
Car care	153
Car settings	64
Car upholstery	155
Car wash	154
Cargo area	
bag holder	88
electrical socket	88
load retaining eyelets	88
loading	133
Cargo area, bulb replacement	176
Catalytic converter	220
recovery	121

CD changer	193
random	194
CD functions	193
Changing tracks, CD/MD	193
Checks	
fluids and oils	161, 164
Child	
child seat, fitting	32
child seats and airbags	27
Children	
blocking doors and windows	97
child safety locks	98
child seats and side airbags	19
position in car	29
safety	30
safety equipment	27
Cigarette lighter socket	
front seat	45
rear seat	54
Clean inside and out	3
Cleaning	
automatic car wash	154
car wash	154
seatbelts	155
upholstery	155
Climate control	
general	68
personal preferences	64
Clock	
combined instrument panel	39
parking heater	77

Clutch fluid, checking and topping up ...	167
Cold start	111
Collision	
collision sensors	21
collision status	25
inflatable curtain	21
inspecting the airbags	26
Colour code, paint	156
Combined instrument panel	39
Compass	58
calibration	58
Condensation	163
Control panel	
personal preferences	62
Coolant, checking and topping up	166
Cooling system	104
Courtesy lighting, bulb replacement	175
Cruise control	51

D

Deadlocks	97
temporary disconnection	100
Defroster	71
door mirrors	71, 74
rear window	71, 74
Designation of dimensions	136
Diesel	163
engine preheater	41
Diesel engine, starting	106
Diesel filter	163

Diesel particle filter	106
Dipped beam	46
Dipped beam, bulb replacement	172
Direction indicators	47
Direction indicators, bulb replacement ..	173
Disc text	194
Display, messages	43, 44
Dolby Surround Pro Logic II	186, 187
Door mirror, position memory	60
Door mirrors	59
Door opening, keyless	65
Driver's door control panel, overview	38
DSTC, see also Stability system	45, 117

E

ECC	69
Economical driving	104
Electrical socket	
cargo area	88
centre console	45
rear seat	54
Electronic immobiliser	90
Emergency calls	197
Emergency puncture repair	145
Emissions	218
Emissions of carbon dioxide	219
Emissions system	
fault indicator	41
Engine	162
Engine compartment	162

Engine oil	164
Engine specifications	210
Environmental philosophy	3
EON – Enhanced Other Networks	192
Equalizer	188
Expectant mothers	11

F

Fan	
A/C	70
ECC	72
Fast forward/rewind	193
Floor mats	85
Fluids and oils	
checks	161, 164
Fluids, capacities	216
Fog lamps	
on/off	46
Fog lamps, bulb replacement	174
Frequency update, automatic	192
Fuel	
consumption	218
fuel consumption, display	48
fuel filter	163
fuel system	163
level indicator	41
parking heater	77
refuelling	105
Fuse table	
fuses in the engine compartment	179

fuses in the passenger compartment	182
Fuses	
changing	177
general	177
relay/fuse box in the engine compartment	178
relay/fuse box in the passenger compartment	181

G

Gearbox	
automatic	111
manual	109
Glovebox	85
locking	97
Gross vehicle weight	209

H

Handbrake	54
Hazard warning flashers	53
Head restraint, centre seat, rear	86
Headlamp pattern	134
Headlamps	
headlamp washers	49
off/on	46
Heating	
front seats	71, 74
Home safe lighting	47, 60
setting	65

I

IC	21
IDIS	197
Ignition keys	107
IMEI number	202
Immobiliser	90, 107
"Important!" dialogue boxes	2
"Important!" texts	2
Incoming calls	199
Information display	43
Infotainment	
menus	186
inspecting the inflatable curtains	26
Instrument lighting	46
Instrument overview	
left-hand drive	34
right-hand drive	36
Integrated booster cushion	30
Interior rearview mirror	58
Intermittent wiping	49
ISOFIX	32

J

Jump starting	123
---------------------	-----

K

Kerb weight	209
Key	90
keyless lock and ignition system	94

Key blade	91
Key, remote control	90
Keyless drive	94, 108
Keyless entry	65
Kick-down	111

L

Lambda-sond	220
Lighting	
automatic lighting	83
bulb replacement	171
exterior	
Lighting	
Lighting panel	46
passenger compartment	82
rear seat	82
Lights	
headlamp levelling	46
main beam "flash"	47
Loading	
cargo area	88
general	133
load capacity	133
Lock settings, personal	62
Locking	96
Locks	89
locking	96
unlocking	96
Lubricants	215, 216

M

Magnetic zones	59
Main beam	
off/on	46
switching and flashing	47
Main beam, bulb replacement	172
Maintenance	159
rustproofing	158
self-maintenance	161
Making calls	199
MD functions	193
Menu structure	
media player	195
telephone	203, 204
Menus	
audio system	186
personal preferences, telephone	186
Messages in the information display	43
Misting	
rear window	71, 74
timer function, A/C	71
timer function, ECC	73
windscreen	73

N

NEWS	191
News broadcast	191
"Note" texts	2
Number plate lighting, bulb	
replacement	175

O

Oil	
capacities	213, 214
changing	164
driving in adverse driving conditions	212
filter	164
oil grade	212
pressure, indicator	42
Outside temperature gauge	39
Oxyhydrogen gas	123, 170

P

PACOS	17
Paint	
paintwork damage and touching up	156
Paintwork	
colour code	156
Panel vents	68
Parking assistance	119
sensors for parking assistance	120
Parking brake	41, 54
Parking heater	
battery and fuel	77
general	76
parking on a hill	77
Parking lamps	
off/on	46
Parking lamps, bulb replacement	173
Passenger compartment	
lighting	82

Passenger compartment filter	68
Petrol engine, starting	106
Petrol grade	219
Phone book	
handling numbers	200
PI seek	192
Pinch protection, sunroof	63
Polishing	154
Position lamps, bulb replacement	173
Position lamps, see also Parking lamps ...	46
Power steering fluid, checking and topping up	167
Power windows	55
blocking	56
passenger seat	56
rear seat	57
Programme functions	190
PTY – Programme type	191
Putting calls on hold	199

R

Radio	
radio settings	189
radio stations	189
Radio text	192
Rain sensor	50
Random	
CD and MD player	194
RDS functions	190
resetting	192
Rear light cluster, bulb replacement	174

Rearview mirror	
compass	58
interior	58
Rearview mirrors	
door	59
electrically retractable	60
Recirculation	
A/C	70
ECC	73
Recovery	121
Refrigerant	68
Refuelling	
fuel cap	105
Refuse calls	199
REG –Regional radio programmes	192
Regeneration in cold weather	106
Relay/fuse box	
in the engine compartment	178
in the passenger compartment	181
Remote control	90
battery replacement	93
detachable key blade	91
functions	90
key blade	91
keyless drive	94
Reverse gear inhibitor	
five-speed	109
six-speed	110
RME	163
RND, see also Random	194
Rustproofing	158

S

Safety system	
automatic gearbox	111
SC	117
SCAN	
CD and MD	194
radio stations	190
Seat	
power seat	81
Seatbelt reminder	11
Seatbelt tensioner	12
Seatbelts	10
pregnancy	11
rear seat	11
seatbelt tensioner	12
Seats	
lowering the front backrest	80
manual setting	80
Service locking	92
Service programme	160
Side airbags	19
Side marker lamps, bulb replacement ...	173
SIM card	197
SIPS bags	19
Slippery driving conditions	104
SMS	
read SMS	202
write SMS	202
Soot filter	106

Sound			
audio settings	187	Storing stations, manual and	
audio source	187	automatic	189
Spare wheel	142	Subwoofer	187
Speed classes, tyres	136	Sunroof	61
Speed dial	201	pinch protection	63
Speed dial numbers	201	sunscreen	63
Speedometer	39	Sunscreens, sunroof	63
Spin Control	117	Surround	186, 187
SRS system		Switch in centre console	45
general	15	Symbols in the combined	
switch	18	instrument panel	118
Stability system	117	T	
indicator	41	Tachometer	39
reducing	45	Tailgate	
symbols	118	automatic relocking	64
Stains	155	locking	90
Standby mode, telephone	199	Tank	
Standby, telephone	199	filling	105
Starter motor	221	Tank volume	218
Starting the car	106	TC (Traction Control)	117
STC, see also Stability system	45, 117	Telephone	198
Steering lock	107	calling from the phone book	201
Steering wheel		on/off	199
keypad	198	standby mode	199
Steering wheel adjustment	53	text input	200
Steering wheel keypad, left	51	Temperature	
Steering wheel keypad, right	52	A/C	71
Stone chips and scratches	156	ECC	74
Storage spaces in the passenger		Temporary spare	138
compartment	84		
		Timer	
		A/C	71
		ECC	73
		Towbar	126
		installation	128
		removal	131
		Towing	121
		Towing bracket	
		general	126
		installation	128
		removal	131
		TP – traffic information	190
		Traction Control	117
		Traffic information	190
		Trailer	
		cable	126
		driving with a trailer	124
		trailer weight	209
		Trip computer	48
		Trip odometer	39
		Tuning	189
		Tyre	
		pressure	140
		Tyres	
		designation of dimensions	136
		direction of rotation	139
		driving characteristics	136
		general	136
		puncture repair	145
		speed classes	136
		summer and winter wheels	139

tread wear indicators	137
winter tyres	137

U

Unlocking	
boot lid	96
from outside	96
from within	96
keyless	96
settings	64

V

Vanity mirror, bulb replacement	176
Vehicle data	160
Volume	
auto volume control	188
programme types	192
telephone/media player	200
Volume, see also Audio volume	187

W

"Warning!" dialogue boxes	2
"Warning!" texts	2
Warning symbol, AIRBAG system	13
Warning triangle	141
Washer fluid, topping up	166
Washers	
for windscreen and headlamps	49
Washing the car	154

Waxing	154
Wheels	135
fitting	144
removal	143
rims	138
Whiplash injury	22
WHIPS	22
Windscreen wipers and washers	49
Winter tyres	137
Wiper blades, changing	168



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